MODERN BANKING

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BY

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PREFACE TO THE THIRD EDITION

WHEN the first edition of this book was written in 1937 it was essentially a snapshot, through a theorist's eyes, of banking (mainly English banking) in the middle nineteen-thirties. The present edition is similarly a snapshot of banking at the beginning of the nineteen-fifties. The material has changed substantially in the meanwhile: radical changes were already in progress in the nineteen-thirties and my Second Edition, prepared in 1946, came too soon after the war to allow for the crystallization of the innovations. To allow adequately for these changes and to make room for other improvements almost complete rewriting of the book has been necessary, although much of the original structure remains.

The only substantial change in the scope of the book is that it is now just a book about banking, to the exclusion of any attempt to outline the theory of international prices. The old Chapter 7, which included some analysis of the determinants of the balance of payments, has gone and with it has gone Chapter 8 on international currency arrangements. In its place the new Chapter 6 takes the balance of payments for granted and seeks to trace the impact of external transactions on the banking system. But since the International Monetary Fund has some of the characteristics of a bank, and since the International Bank is called a bank, I have included an appendix on each of these twins, and these appendixes are lineal descendants of the last part of the old Chapter 8.

The revolution in the technique of central banking has involved a complete recasting of Chapter 5 (in many ways the heart of the book), though a few of the original paragraphs remain. Partly for the same reason Chapter 3, on the discount market, has demanded extensive rewriting. In this part I have been greatly helped by Mr. R. H. Jessel and Mr. W. T. C. King, whose intimate knowledge of the discount market has been freely available to me.

The original Chapter 6, on the *modus operandi* of Bank Rate, has been largely rewritten as the new Chapter 7, in the light of the controversies and experiences of the last thirteen years, and the new Chapter 8 is in a sense an addendum to it. In Chapter 9 there are substantial changes near the end. Chapter 10 is very much what it always was. The original Chapter 11, on the problems of 'Stock Market Control,' was written very much under the shadow of 1929. It has now given way to a rather wider discussion of 'Qualitative Credit Control', but part of the original chapter appears as Appendix III. Chapter 12 is not greatly changed, though both for this chapter and for Chapter 4 I have had the benefit of the specialist knowledge of my colleague, Mr. J. S. G. Wilson, in the field of banking in the Dominions.

Although so much of the book has been newly written it remains the same *kind* of book. The original was 'addressed primarily to the university student who wishes to include in his honours course a study of banking sufficient to enable him to understand how this important part of the economic system really works nowadays'. This is equally true of this Third Edition: what has changed most is that 'nowadays' means 1950 instead of 1937. I have tried to maintain much the same level of exposition as in the original book. Again it is, as before, a summary and restatement of ideas that are the subject of agreement among most economists. But perhaps my personal point of view has done more this time than before in shaping the arguments and in drawing the conclusions; most of all, this is true of the new Chapter 13, 'Some Reflections for the Monetary Theorist'.

However much the personal element has intruded, my debts to others are necessarily very great indeed. Particularly I owe much to the teachings and the published works of Professor D. H. Robertson and Lord Keynes, as must anyone who writes in this field. The background of monetary history is important though unobtrusive, and

for this I owe much to Sir Theodore Gregory and Professor R. G. Hawtrey. My teachers at Cambridge and my present and former colleagues at Oxford and London have played a continuing part. I have had the benefit of advice on particular points from many people of great experience in the ways of the City of London; and the files of *The Economist* for a century and of the *Banker* for the last quarter of a century have played their part. Mr. R. Turvey and Mr. A. C. L. Day have undertaken the dreary work of checking typescript. The London School of Economics has provided efficient service for much of the typing of the present edition. Professor D. H. Robertson has been good enough to read the proofs and has suggested a number of small but valuable corrections.

One debt stands apart. My serious study of the problems discussed in this book began when I first joined the staff of the London School of Economics. My main duty, as circumstances then were, was to assist Barrett Whale, and to assist him was to have at hand a rich and generous source of ideas, inspiration, and encouragement. Through all its changes this book has remained firmly based on the foundations laid in those years. He died within a few days of my completing this Third Edition; I can now only wish that he would have been willing to acknowledge the book as still his own grandchild.

R. S. S.

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1

INTRODUCTORY

1. *The Supply of Money and the Price Level*

FOR many decades banks have been recognized as traders in money. Were this their sole function economists would undoubtedly be interested in them, just as economists are interested in the activities of the issuing houses or any other section of the capital market. The linking of borrower and lender, in that it influences the particular direction of the crystallization of capital, is a process of economic significance. But banks and banking have in fact bulked far larger in works on economics than have issuing houses or the solicitors who arrange mortgages on property. The reason for this treatment is that banks are not merely traders in money but also in an important sense *manufacturers* of money.

Perhaps we ought to be quite clear what we mean by 'money' and why we interest ourselves so much in the behaviour of money. Money is something that is widely accepted for the settlement of debts.[1] It is not of any direct use for the actual 'consumption' that is the ultimate end of all economic activity, nor is it of direct use in the process of producing consumption goods from other goods and services. But we can use money to buy goods and services, whether for immediate consumption or for use in the production of ultimately consumable goods. In a 'money economy' of the kind with which we are familiar the all-important process of producing goods for ultimate consumption is carried out at the direction of people who *buy* (*with money*) the original factors of

[1] The word 'debt' covers all monetary transactions. If a child enters a shop to buy a pennyworth of sweets, it asks for the sweets, thereby incurring a debt of one penny, which is settled immediately by passing the coin across the counter.

production, put them together, and *sell* (*for money*) the goods produced. They are induced to undertake this process by the prospect of a *money profit*. The direction of the original factors of production into the fundamental processes of producing what we want to live on depends upon various *flows of money*. An alteration in the flow of money implies an alteration in the flow of final goods and services. This is true whether the alteration takes the form of contraction or of expansion or of mere diversion of the flow of money. An expansion of the supply of money never takes the form of everyone finding their money balances increased in identical proportions.[1] The increase in the supply of money is at the outset concentrated in a few particular channels, and the persons to whom it goes are thereby enabled to increase the share of the factors of production or of the produced goods at their disposal. Any person or institution with the power of regulating the supply of money has therefore great significance in the economic world.

The peculiar importance of banks, distinguishing them from other financial institutions (insurance companies, building societies, money-lenders, &c.) which also lend and borrow money, is derived from the fact that claims against them, called *Bank Deposits*, are themselves *money*. People commonly do, by passing cheques to each other, transfer the title to bank deposits—ownership of the bank deposit passes from the drawer to the drawee of the cheque. The deposits, when so transferred, are widely accepted in settlement of debts, and it is for this reason that, in accordance with the definition of money (given in the previous paragraph) we can label bank deposits 'money'. Since we regard this as the most important distinguishing characteristic of a bank, we can define a bank

[1] The opposite process—an 'overnight' reduction of all money balances—played an important part in the monetary reforms in certain European countries at the end of the Second War, and its results provided illuminating evidence of the limitations of the Quantity Theory.

as an institution whose debts (bank deposits) are widely accepted in settlement of other people's debts to each other.[1] The bank deposits in existence are thus an ingredient—in Anglo-Saxon countries the most important ingredient—in the total supply of money. The banks by their behaviour govern the supply of bank deposits (as will become apparent in later chapters) and thus have an important influence on the supply of money.

As a preliminary justification of the study of banking we can refer to the most elementary theory of the effects of changes in the supply of money—the theory known as the *Quantity Theory of Money*. It is stated in various forms, more or less rigorous. Sometimes it is said that changes in the supply of money tend to produce changes in the same direction in the general level of prices. The strictest version says that the value of money varies inversely, and the general level of prices directly, in proportion to changes in the supply of money. The first and vaguer form has the advantage of being more obviously consistent with observed facts. The second and more rigorous form has the advantage of being the clear conclusion of a tidy and logical argument built on strictly limited assumptions.[2]

The Quantity Theory is based on the fact that money is wanted not for its own sake but for the convenience of having ready command over objects of more direct service

[1] These definitions are chosen because they appear to me to describe in simple terms the common practices of people in a modern community, but I must emphasize that the main conclusions of monetary analysis do not depend upon the precise definitions chosen. Readers already attuned to modern economic analysis may prefer to think of the infinite variety of assets as ranged in order of liquidity, with Bank Deposits at (or near) one extremity of the range. The economic significance of a change in the supply of money is based on the disturbance of the liquidity-distribution of the public's assets, and such a disturbance occurs when Bank Deposits are changed, whether these Bank Deposits are or are not labelled 'money'.

[2] The following paragraphs are not intended as an exhaustive analysis of the Quantity Theory. The reader should refer, for further discussion, to the standard works of Marshall (esp. *Official Papers*), Fisher (esp. *Purchasing Power of Money*), Keynes, and Robertson.

to us. The more money a person holds the greater is the convenience he enjoys (assuming, of course, that his money is in convenient forms—not a thousand pounds' worth of threepenny-bits!). But the holding of money implies the missing of an opportunity of increasing one's satisfactions of other kinds. For a person can use money either for expenditure on immediate consumption, from which immediate satisfaction is derived, or for acquiring an 'investment' (e.g. the ownership of capital goods) which will yield him further money income in the future—thus enabling him to increase his income of satisfactions at some future date. In deciding to secure the convenience of holding a money balance, a person is deciding to deny himself the alternative satisfactions he might have enjoyed. Individuals and corporations do, in fact, get into the habit of holding a certain average money balance, the size of which depends on the money volume of their transactions, their habits of payment, and similar factors. Given other things unchanged, an increase in a money balance above the habitual level (having regard to seasonal and similar considerations) will lead the holder of it to consider spending more on consumption or investing more.[1] Now if there is an increase in the *aggregate* supply of money, holders of excess balances must predominate over holders of uncomfortably low balances. Accordingly there will be a *general* disposition to spend more on consumption or on investments. Spending more on consumption means that there is an increase in the money demand for consumption goods. On ordinary supply-and-demand lines we expect some rise in the prices of consumption goods and a connected tendency, perhaps, of supplies to increase. An increased money demand for investments has not such

[1] From a realistic point of view it is worth envisaging the possibility of things working the other way round: an individual sees an opportunity for profitable spending and is thereby stimulated to get into debt to a bank—the bank offering its own indebtedness (deposits) in exchange. The remainder of the analysis needs no modification to fit this case of money supply responding to changed demand.

obvious effects on the price level, but again there is a tendency for certain prices to rise. The initial effect may be simply that people try to buy more of old securities. These can, however, only be transferred. Their prices rise, and there is a better demand than before for securities newly issued by businesses wanting to extend their operations. As money for capital purposes can be obtained more easily, business men increase their money demand for raw materials and factors of production, and under this pressure of increased money demand for goods and services,[1] prices tend to rise. Whether the surplus money balances are directed towards consumption or investment, therefore, the effect of rising prices tends to appear.

People cannot, as a whole, reduce their money balances. Individuals may pass them on; but the supply of money remains unchanged. But as prices rise, holders of balances have to revise their notions of what is a comfortable balance to hold. Prices have risen, so that their former average balances have become uncomfortably small relatively to their outgoings. Accordingly people cease, as prices rise, to feel that their new high balances are unnecessarily large, and cease to increase their rate of expenditure (on consumption and investment). Prices therefore cease to rise.

The above argument can easily be adapted to describe the converse process. A reduction in the total supply of money implies uncomfortably low balances on the whole. Contraction of expenditure follows, prices fall, and as prices fall the new level of balances again becomes adequate, and things can settle down at a new (lower) level of prices, and a new (lower) level of money balances. In short, given other conditions, there is to every level of money balances (i.e. to every supply of money) an appropriate

1 The connexion between the market for old securities and the entrepreneurs' demand for goods and services is unfortunately rather more complicated than this: the reader will find further elucidation in Chapter 7.

general level of prices: increased supply of money tends to produce rising prices, decreased supply of money tends to produce falling prices. This Quantity Theory presumption holds good in whatever way the change in the supply of money comes about: for an increased supply of money must mean that on the average people have surplus balances, and vice versa. The theory, in this form at least, is equally applicable to a private enterprise economy and to a 'planned economy' of the type towards which Britain has recently been moving.

Rising and falling prices have certain unfortunate effects. First, there are the *distributional* evils. Certain money incomes—those of judges, clergymen, *rentiers*—are fixed either by law or by custom, and other money incomes—those of civil servants, doctors—are not changed at all rapidly as other prices change. Recipients of these incomes therefore enjoy an increased real income as prices fall, and suffer a reduction as prices rise. On the other hand, business men, deriving their incomes from profits, and ordinary shareholders find their money incomes increasing faster than prices are rising, since profits result when the costs, some of which are fixed by long contract, &c., have been deducted from the rising prices.[1] Wage-earners who are in employment regularly tend to gain when prices fall and lose when prices are moving up rapidly, though their wage-rates may sooner or later be adjusted to the changed level of prices. These redistributions of real income can in no wise be imputed to varying deserts: there is clear injustice between the contrasting classes of income-receivers when prices are moving decidedly upwards or downwards.

Secondly, there are the evil effects of rising and falling prices on *production*. As certain costs, particularly the prices of certain factors of production, are fixed by long

[1] During the Second World War the normal effect of rising prices on profits was largely stultified by the wide range of governmental contracting and by special taxation.

contract, by law, or by custom, the entrepreneur who is faced by falling prices finds that production is becoming unprofitable, and, after a point, decides to reduce his output. Economic activity and the level of employment for wage-earners therefore decline. Resources that might have been used to produce useful things stand idle, while individuals suffer the distresses occasioned by unemployment. This contraction of output is by no means evenly spread. For one of the first ways in which a business man is likely to curtail his operations is by cutting down any plant extensions and suspending replacement of worn-out plant. Accordingly the depression is likely to be particularly severe in the capital goods trades, and people attached to these trades suffer most. But when prices are rising, the stickiness of costs leads to the profit margin widening, thus providing the entrepreneur with a motive for increasing his operations. Economic activity increases, unemployment declines. The 'boom' is, like the depression, more extreme in the capital goods trades, because extended operations mean full replacement and frequent additions to equipment. This looks very well, and would appear at first sight to be rather an advantage of rising prices. In some measure it is; but bitter experience has shown that a 'boom' of increasing economic activity and rising prices is always followed by a depression, and, indeed, theoretical analysis leads us to suppose that a slump must *inevitably* follow a boom that has developed to any appreciable extent.[1] The good time, though it has substantial attractions, is far from being as attractive as would be a period of full employment without an aftermath of depression.[2]

[1] For this difficult matter see especially Harrod, *The Trade Cycle*, and Hicks, *A Contribution to the Theory of the Trade Cycle*.

[2] The above passage was written before the days of Full Employment and may now seem a little out of place. Against this I would argue that success in Full Employment policies has depended upon a favourable monetary climate, the creation of which has depended upon a correct understanding of monetary economics. I would also argue that Full

Rising prices and falling prices both, then, appear to have serious disadvantages; and changes in the supply of money appear to be among the possible causes of both. It behoves us therefore to find out who, in the modern world, regulates the supply of money, and on what principles their operations are based.

II. *The Sources of Money Supplies*

In the most advanced countries by far the greatest part of the supply of money consists of *Bank Deposits*, sometimes called 'Bank Money'. The Bank Deposit is simply a debt of a bank to an individual or corporation. In exchange for certain rights (to which we shall return presently) the bank enters in its books so much 'to the credit of' Mr. So-and-so. The latter may then settle his debts to other people by making over to them parts of his 'credit balance' or bank deposit. Almost all large payments are made in this way, the instrument by which the deposit is transferred from one person to another being the familiar 'cheque'. When one person pays another by cheque, what happens fundamentally is that the bank's debt to the payer (or 'drawer') is reduced by the amount of the cheque, and the bank's debt to the payee is increased by the same amount. The drawer has made over to the payee his claim against the bank. It is by circulating the debts of the banks (the credit balances of the public at the banks) in this way that most transactions are settled.

Generally, when the bank makes an entry of I O U in favour of a person, the transaction remains simply a book entry. The bank in its own books stands indebted to Mr. So-and-so to the amount given. That is the pure Bank Deposit. But sometimes Mr. So-and-so wants evidence of the debt in a different and more readily transferable form. In this event the bank enters the amount, not in

Employment carries with it a peculiar threat of continually rising prices and that monetary measures may have an important part to play in combating this threat.

favour of Mr. So-and-so specifically, but in favour of 'Bearer'. It then tears the page out and hands it to Mr. So-and-so, who becomes the first 'Bearer'. He, however, can readily pass it on, passing on, in fact, the claim against the bank without the bank having to record the transaction in its books. When this is done the page torn out of the bank's ledger is called a *Bank Note*. A Bank Note is thus neither more nor less than visible evidence of a bank's debt, which can be passed round from hand to hand in settlement of all sorts of individual debts. This form of bank money has its advantages and disadvantages for both parties. To the banker, the note system has the advantage that he does not have to bother about entering the transfers from one individual to another. To the individual the note form has the advantage that he does not have, every time he makes a payment, to produce evidence that he has a bank deposit on which to draw. Cheque payments are convenient enough, but one is unwilling to accept a cheque in settlement of a debt unless one is reasonably sure that the drawer has a genuine deposit on which to draw. The bank deposit is very widely accepted in settlement of debts, but the individual cheque is accepted only when the payee is satisfied that there is a bank deposit behind it.[1] On the other hand, to the banker the note form has the disadvantage that he must take greater precautions against forgery. Forgery of book entries can be prevented by checking the honesty of clerks in the bank's employment; but prevention of forgery of bank notes involves careful designing and choice of paper and a host of other precautions. To the individual the note form has, first, the disadvantage that the amount of the note—a round sum such as one dollar, one pound, or ten shillings—very

[1] This distinction is sufficient to justify describing bank deposits as money, while denying that cheques are money. But in any case, it should be clear that the 'money' is the bank deposit—the cheque is merely the legal *instrument* by which the deposit is transferred from one name to another.

frequently does not coincide with the amount of the debt he wishes to settle. Secondly, it has the disadvantage that the notes are as valuable to other people as they are to himself, whereas his cheque-book is, broadly speaking, of value only to himself. Consequently, the settlement of debts by the payment of notes involves carrying about pieces of paper that other people have the incentive to steal, whereas settlement of debt by cheque is quite a safe procedure. If a man wishes to settle a debt of, say, £3. 10*s.* he can pay by cheque (provided that his creditor has confidence in the existence of the debtor's claim on the bank), which merely involves carrying a cheque-book and filling a single cheque form. Or he can pay it in notes, which means that he must carry with him four separate pieces of paper (three one-pound notes and one ten-shilling note) all or any of which he may lose without much chance of recovery.

The Government may by law restrict to one or a number of banks the issue of notes. Practice in this respect varies from country to country, and is largely the outcome of historical accident; but there has been a general disposition to restrict note-issuing powers more and more, as a result of the spreading notion that the supply of money must be controlled by the State. In England note-issuing powers are now restricted to the Bank of England, but in Scotland a few other banks have strictly limited rights of issue. The State also sometimes says that certain notes shall be 'legal tender'. Money of any kind is 'legal tender' if the offer of it, in the exact sum, in settlement of a debt leaves the creditor no option but to discharge the debt. If a debtor offers non-legal tender money the creditor may decline to accept it without modifying his legal claim against the debtor. Bank deposits have never been constituted legal tender, but throughout the United Kingdom Bank of England notes are legal tender.[1]

In addition to money created by the banks there is

[1] The large notes (£5) are legal tender in England and Wales only.

money created by the State. This is sometimes in the form of notes, which are to all intents and purposes like bank notes, but derive their acceptability not from their being a claim against a bank but simply from a decree of the State that they shall be legal tender. Such were the one-pound and ten-shilling Treasury Notes which circulated in England during the years 1914–28. More generally the State issues metallic coins of small denominations, such as one shilling, one penny, three-pence, twenty-five centimes, ten cents, &c., which are legal tender for payment of small debts only, and which the public uses for convenience in paying small sums and odd amounts as supplements to note payments.

The supply of money thus depends directly on these two sources—the banks and the State. Only in most extraordinary circumstances—such as the 1923 inflation crisis in Germany—is any other body able to create money. If we want to know how the supply of money is controlled we must seek the motives that guide the banks and the State. In this chapter only certain very general points will be covered. The entire technique of monetary control will only become apparent as the book proceeds.

III. *The Process of Creation of Money*

Before examining the process of money-creation let us consider the relative amounts of money from the two main sources. For Great Britain the approximate figures for October 1949 were:

	£ millions
Bank deposits (including Public Accounts and Other Accounts at the Bank of England)	6,240
Bank notes in circulation*	1,260
Coin ('State Money')*	170
Total	7,670

Including notes and coin held in commercial banks.

These are only round figures, but the import of them is clear enough—Bank Money forms a large proportion of

the total supply of money. In the United States also, Bank Money is predominant.

Restricting ourselves for the time being to the operations of the ordinary joint-stock banks, we have to face the question, what induces the banks to get into debt to the public to these enormous amounts? The banks have voluntarily entered in their books I O Us to all sorts of people, to an aggregate running into thousands of millions of pounds. What has induced them to do so? They are profit-seeking corporations. They are induced to become debtors to other people by these others offering in exchange certain claims that equal the capital value of the bank's liability and bear interest. It is from the interest payment on these claims that the bank derives its income. Provided that it is successfully managed, the bank's assets always equal its liabilities. The bank deposits—i.e. the debts of the bank to the public—are always covered by the assets people have offered to the bank in exchange for deposit claims against the bank. The process of 'creation' of bank deposits is essentially an exchange of claims. The member of the public offers a claim of some sort—such as legal tender State money, or a government bond, or a mere promise—and the bank offers a book debt called a bank deposit. The economic significance of this exchange of claims lies in the fact that the claim against the bank——a debt which did not previously exist—can be used as general purchasing power. It is *money*, whereas the debt against which it was exchanged is not money. The operation therefore adds to the total supply of money.[1]

The standard assets of a commercial bank are overdrafts and loans, bills discounted, investments, and cash.[2]

[1] Except, of course, in the case of legal tender state money being taken by the bank—in which case the public has merely altered the *form* of the money it holds.

[2] The following pages serve to introduce these standard assets and to explain how bank transactions in them affect the supply of money. More detailed discussion will be found in later chapters (particularly 2, 3, and 9).

The overdraft system of the banks is well known. In return for an undertaking on the client's part, an undertaking often reinforced by the handing over to the bank of some negotiable security of which the bank may dispose if the client fails to meet his obligations, the bank allows the client to 'overdraw' his account. That is to say, the client is allowed to draw cheques beyond the amount previously standing to his credit in the bank's books, up to the limit set in the overdraft arrangement. (This limit will be fixed after the banker has considered the client's needs and prospects of profit.) This overdraft facility is equivalent to a bank deposit in representing part of the supply of money with which individuals can buy goods and services, and it becomes part of the visible supply as the right to overdraw is exercised and other people (recipients of the borrower's cheques) acquire claims against the lending bank. These claims are money, because people are prepared to accept them in settlement of debts. The borrower undertakes that by the end of, say, three months he will have acquired from other people various kinds of money—State-issued money or claims against this and other banks—to the amount of his overdraft. These claims he hands over to the bank, thus paying off his accumulated debt. In addition he is obliged to pay interest—i.e. he has to provide additional money, so much per cent. on his overdraft, as a payment for the use of the money for the given period. It is out of this additional money (the interest charge) that the bank makes its living. As far as giving and receiving claims in loan and deposit transactions are concerned, it will, if everyone meets his obligations, finish 'all square'. The income of the bank depends on the additional claims (the interest and other charges) it makes against people who incur debt to the bank, either directly by loan or overdraft arrangements, or indirectly when the bank acquires the claims from previous creditors of those people.

When the system by which banks lend to individuals

and firms is not the overdraft system but the loan system, the process is even simpler in its effects on the supply of money. The borrowing client gives certain undertakings and also perhaps provides 'collateral security' to protect the bank. The bank at once places the sum of the loan to the credit of the client: its debts are increased by that amount, and, since its debts constitute money, the supply of money is increased by the amount. At the same time the assets of the bank have increased by the amount of the loan. Its liabilities and its assets have increased by equal amounts. Were the amount £1,000 and were this the sole operation of the bank the balance sheet would be:

Liabilities	£	*Assets*	£
Deposits (i.e. Credit balances of clients) . . .	1,000	Loans to clients . .	1,000

The gross income of the bank would be increased by whatever interest charge it made for the loan. Out of this gross income it might pay a lower rate of interest on clients' credit balances, and it would have to meet its costs of administration. Any remainder would be a net profit.

As the borrowing client pays away the £1,000 by cheques drawn in favour of other people, the liabilities of the bank become liabilities not to that client but to the payees of the cheques. What happens next depends on what those payees choose to do with their claims against the bank.

An alternative procedure, which used to be very common but is now mainly confined to a few branches of overseas trade, is that in which the borrower finances himself by drawing a bill of exchange. The bill of exchange is in effect a written promise to pay a sum at some future date, usually guaranteed by some reputable finance house.[1] Then a person with funds to spare can 'discount' the bill, which means he can pay a sum of money for it now, the sum being slightly less than the sum promised in the bill. When a bank discounts a bill of exchange it in fact acquires

[1] For detailed discussion of bills of exchange see Chapter 3.

the bill as an asset, giving in exchange a deposit—i.e. incurring a debt to a client. Its liabilities and its assets are increased by the same amount. Its balance-sheet still balances; but its gross income is increased by the difference between the sum it pays for the bill and the sum which the bill says is payable at the named date ('maturity'). This difference is called the 'discount'.

Another way in which a bank may add to its debts is by the purchase of securities, such as government bonds. The bank pays for the bonds by a cheque on itself,[1] i.e. it gives a debt in exchange for the bonds that become part of its assets. The balance-sheet shows change on both sides:

Liabilities	£	*Assets*	£
Deposits (i.e. debts to clients) . . .	1,000	Investments (Government bonds) . . .	1,000

The process is precisely the same when the bank acquires land or buildings for its offices.

A bank will also give a credit balance (i.e. incur a debt) to anybody who offers it a claim against another bank. This happens, for example, when Smith, who banks with Barclays, draws a cheque in favour of Jones, who pays it into his own account at the Midland. In that instance there has merely been a transfer of indebtedness between banks—no increase. The original balance-sheet positions of the two banks may be supposed to have been thus:

MIDLAND BANK				BARCLAYS BANK			
Liabilities	£	*Assets*	£	*Liabilities*	£	*Assets*	£
Deposits (Jones)	1,000	Bills discounted and investments, &c.	1,000	Deposits (Smith)	2,000	Loans, &c.	2,000

[1] Or it may give a cheque on its balance with the central bank. The effect is precisely the same, for the payee at once exchanges this claim for one against his own bank (he pays the cheque into his account) and aggregate public claims against the banks are increased by the given sum. The settlement of any inter-bank indebtedness which may arise is discussed later.

Smith then draws a cheque for £500 in favour of Jones who pays it into his own account. The immediate effect on the position of the two banks is shown below:

MIDLAND BANK

Liabilities	£	*Assets*	£
Deposits (Jones)	1,500	Bills discounted and investments, &c.	1,000
		Claims against other banks (Barclays)	500
	1,500		1,500

BARCLAYS BANK

Liabilities	£	*Assets*	£
Deposits (Smith)	1,500	Loans, &c.	2,000
Claims of other banks	500		
	2,000		2,000

This will not be the final position, as Barclays and the Midland will settle their inter-bank indebtedness by some transfer of assets from Barclays to the Midland. Barclays's assets will go down by £500 whilst the Midland's assets go up by £500. Which particular assets are transferred we shall see later. But it is clear that there has been no increase in the supply of money. All that has happened has been that the composition of the supply has changed, in that more of it is now Midland Bank debts and less is Barclays Bank debts, and, of course, the ownership of the money has passed from Smith to Jones. The banks are less in debt to Smith and more in debt to Jones than before. Jones has more purchasing power at his disposal than before, Smith has less. The aggregate supply of purchasing power is unchanged.

One very important kind of asset the banks may acquire in exchange for a deposit liability has not yet been mentioned. This is 'Cash'. Cash consists of State money (in Britain now only 'silver' and copper coin) and of liabilities

of the central bank, or bankers' bank (in Britain, the Bank of England). The liabilities of the central bank may be either book liabilities—i.e. deposits with it—or bank notes. When a client 'pays in' a wad of notes and some odd silver and copper coins, say, £31. 17*s.* 9*d.*, he acquires a deposit to that amount. The bank, that is to say, becomes indebted to the client to the amount of £31. 17*s.* 9*d.* Its balance-sheet will have the following items added:

Liabilities	£ s. d.	*Assets*	£ s. d.
Deposits . . .	31 17 9	Cash in hand . .	31 17 9

When a client draws a cheque to 'self' and takes it to the bank for cash, or receives a cheque from someone else and goes to the bank to 'cash it', the process is precisely reversed—Deposits go down and Cash in hand goes down. As, for reasons we have seen above, individuals sometimes prefer to use cash and sometimes cheques, cash is continually crossing the bankers' counters. Retail tradesmen are continually paying it in (exchanging cash for bank deposits) and employers of labour and spenders of incomes paid by cheque are continually drawing out cash (exchanging bank deposits for cash). Passing cash across a bank's counter is essentially changing one kind of money for another—the proximate result is no change in the aggregate supply of money in the hands of the public. That further results may follow any decided net change in its composition is shown below, in Chapter 2.

The book claims against the central bank, i.e. the deposits at the central bank, are another form of cash. It is worth ignoring, for the time being, the fact that the central bank may act as banker to the Government and to other people. Let us consider solely its operations as bankers' bank. The other banks choose to hold deposits at the central bank because it is convenient to settle inter-bank indebtedness by transferring their deposits at one bank—the central bank. If, as we saw above might happen, one bank becomes indebted to another, the debt can be settled

by a book entry at the central bank, the deposit there of the creditor bank (the Midland in our example) being raised and the deposit of the debtor bank (Barclays) being reduced. The aggregate debts of the central bank have not changed; but it now owes more than before to the Midland and less than before to Barclays.

As transactions between members of the public are always leading to a flux and reflux of cash to and from the banks, and to inter-bank indebtedness, every bank finds it essential to hold as part of its assets cash in hand (till money) and at the central bank (bankers' deposits). This cash holding is called the 'cash reserve', and we shall have much more to say about its significance in succeeding chapters. The cash reserve is, to the banker, less attractive than the other assets because it brings him no income. He is obliged to hold it owing to the monetary habits of the public and the structure of the banking system.[1] But once any important section of the public has developed the banking habit the cash reserve need not bear a high ratio to aggregate assets. Consequently, in the world as we know it, bankers have ample inducement to create debts to other people, and that means creating purchasing power.

It is important to remember that the banks put this newly created money into the hands not of everybody at once but of those individuals who can offer to the bank the kind of asset the bank thinks attractive. The banks are important not only because they create money but also because they distribute that money into particular channels. In some way or other, therefore, the actions of the banks have to be consistent with both the total and the composition of the country's production of goods and services. Just how this consistency is achieved must be the most fundamental question on which an analysis of the banking system should throw light.

[1] In some countries the obligation to hold a cash reserve is a legal obligation.

2

COMMERCIAL BANKING

1. *Structural Questions*

THE banking systems of different countries vary substantially from one another; but they have all been tending in the last few decades to gravitate towards 'central banking systems', the archetype of which is our own system. These systems fall into three parts: the central bank, the commercial banks, and various ancillary institutions dealing in certain restricted types of credit. The central banks are discussed in Chapters 4 and 5, the commercial banks in this chapter, and some of the most important ancillary institutions in Chapter 3. Some overlapping is inevitable.

The distinction between central and commercial banks turns essentially on their objects. The commercial bank thinks primarily of profit-making, whereas the central bank thinks of the effects of its operations on the working of the economic system. If the commercial bank is taking a sufficiently long view it will forgo some immediate profits for the sake of stability; but it is competing with other banks and cannot afford degrees of far-sightedness and altruism far beyond those of its competitors. It has its shareholders and must do the best it can for them. The central bank also sometimes has its shareholders, to whom it is expected to pay a dividend after paying all its expenses; but though cases have existed of central banks altering their course in order to avoid a loss of income, this is a departure from central banking principles. The commercial banks may be few or many. They trade with the general public. There is only one central bank in each country, and it does little, if any, ordinary banking business for the general public: it restricts itself in the main to controlling the operations of the rest of the banking system.

In England we generally refer to our own commercial banks as 'joint-stock banks' and if, in writing of the English system, we use the term 'joint-stock banks' this must be considered interchangeable with 'commercial banks'. In writing of the United States it is not uncommon to refer to the commercial banks as 'member banks.' This is not strictly correct, for many commercial banks (some of the 'State banks'—banks registered under State, as opposed to federal, laws) are not member banks; but in many ways the operations of non-member banks and those of member banks are subject to the same influences, and for this reason confusion of the two categories is often pardonable enough. For the Continental commercial banks the term 'credit banks' is often used, in distinction to the investment banks, though the distinction between these two types of institutions is often in practice blurred.

Now that the joint-stock company system has for long been firmly established in almost every country of importance, the typical commercial bank in most countries is a very large institution having a large number of branches scattered all over the country, or at any rate over a large section of it. This is the 'branch-banking' type, the best examples of which are perhaps those of England, Canada, and Australia. In England, for example, a very large proportion of all the banking business is done by the 'Big Five'—the Midland, the Westminster, Barclays, Lloyds, and the National Provincial, most of the remainder being done by the smaller branch systems, more limited geographically (Martins and the District are leading examples). The United States still maintains the opposite and original type—the 'unit banking' system. In this system the bank's operations are confined in general to a single office, though some few are allowed to have branches within a strictly limited area. This legal restriction of the area of operations of an American bank is the outcome of the traditional fear of a 'Money Trust', and particularly the suspicion with which the operations of the New

York financiers are viewed in the Middle and Far West. (Even central banking in the United States has been affected by this powerful historical force—the central bank of the United States is a federation of twelve banks, each with its own region.) Like the unit banks in the mid-nineteenth-century English banking system, the unit banks of America are linked together by the 'correspondent bank' system. A country bank deposits some of its cash reserves with a bank in the nearest big city, and those bigger banks themselves send funds to the great centres of Chicago, St. Louis, and above all New York. Remittances of funds from one part of the country to another can be made through the 'correspondent banks'—i.e. by transference of these funds in the great centres from the name of one country bank to that of another country bank. Corresponding banks often have standing arrangements for consultation on lending risks, and even for sharing loan business with each other. By arrangements of these various kinds the unit banks in a correspondent bank system are enabled to enjoy some of the advantages of a branch banking system. In comparing branch banking with unit banking we must accordingly remember that unit banks are not entirely independent of each other but are connected by the correspondent links.

Before discussing the comparative advantages and disadvantages of unit banks and branch banks, it is necessary to summarize the functions of commercial banks. Commercial banks carry on 'ordinary banking business' with the general public. What is 'ordinary banking business'? These banks have actually developed various miscellaneous services, such as executor and trustee services; but it is not these purely ancillary functions of which we are thinking when we write of 'ordinary banking business'. Ordinary banking business consists of changing cash for bank deposits and bank deposits for cash; transferring bank deposits from one person or corporation to another; giving bank deposits in exchange for bills of exchange, government

bonds, the secured (or unsecured) promises of business men to repay, &c.

The 'bank deposits' are merely I O Us written in the books of the banks, and, as we have seen in Chapter 1, their significance is derived from their general acceptability as money. The acceptability as money of deposits in a particular bank depends on complete confidence in the ability of that bank to exchange its promises (deposits) for other forms of money (directly or indirectly cash) on demand. This is what is meant when it is said that a bank must be *liquid*. 'Liquidity' generally means capacity to produce cash on demand for deposits.[1] A bank must therefore so conduct its business as to maintain liquidity. The lower the cost of maintaining liquidity the more efficient is the bank. Except by transferring its earning assets (bills of exchange, loans, &c.) to other banks an individual bank can only maintain liquidity by holding an adequate 'reserve' of cash—cash being unfortunately an asset which brings no income to the bank. The more readily transferable are its earning assets, therefore, the lower the barren reserve that must be held—and accordingly the lower is the cost to the bank of maintaining liquidity. The form of bank in which earning assets are most readily transferable is, therefore, *ceteris paribus*, the most efficient form. The necessity of maintaining liquidity also implies that a bank must, in order to maintain its position as a bank, avoid losses—for incurring losses means depreciating assets, and that cannot go on for ever without destruction of public confidence, which implies destruction of the general acceptability of deposits at the bank concerned.

In comparing the merits and demerits of unit and branch banking, it is necessary to bear in mind these functions of the banks and these liquidity considerations which affect the success of their business.[2] A comparison between unit

[1] For further observations on the concept of Liquidity see Chapter 9.

[2] The comparison made in this chapter is solely concerned with the relative efficiency of the two methods of organization of *commercial*

banking and branch banking is essentially a comparison between small-scale and large-scale operation. The large concern—the branch bank—secures certain economies of large-scale production, which are, however, limited by the nature of the market for the services of bankers. The branch bank enjoys the advantages of division of labour—some of its more able employees can devote their whole time to the broader problems of bank management, such as the distribution of assets, the rules to be applied to collateral security offered by business men seeking loans, and the recruitment of staff. In more lowly work in the banks the possibility of pushing the principle of division of labour very far is limited by the fact that operations are necessarily divided between branches, and the extent to which the division of labour can be carried within a small branch is as limited as it is in a unit bank office of the same size. The economy of reserves is of enormous importance for, as we have seen above, the maintenance of adequate reserves is absolutely vital to the banker. The large bank can afford to hold a lower cash reserve in each office, for one office can draw on another—by transferring assets or by borrowing —far more readily than can one unit bank draw on another unit bank in the same way. The system of correspondent banks modifies the disadvantage here of the unit bank, but only slightly, for deposits with a correspondent bank are relatively unremunerative. The cheapness of doing remittance business (the sending of money from one place to another for clients) is much increased by the conveniences of the branch system, for inter-office indebtedness can be far more easily adjusted. The correspondent system enables the unit bank to offer the client service comparable with that afforded by the branch bank but not so cheaply.

banking as such. An exhaustive discussion of the subject would have to take into account also the implications for central bank control. Broadly speaking, the position is that a central bank can most easily control a highly integrated branch system, while a large number of heterogeneous unit banks (such as those of the U.S.A.) are not readily amenable to the needs of monetary policy.

The spreading of risks geographically is an advantage of the branch banking system. It is true that the existence of the trade cycle implies times of universal good trade and times of universal bad trade. Were the trade cycle the only cause of business losses, there would be little to choose between unit banks and branch banks—for all the branches of the latter would be losing at once. Even then the unit bank system would, however, be at some disadvantage, for the capital goods' industries suffer most in the depression, and they may well be strongly localized—thus upsetting banks whose activities are confined to particular areas. But in addition to the trade cycle particular industries are subject to secular rises and declines (which are occasionally sharp) as a result of changes in taste, changes in technique, &c. In so far as declining industries are strongly localized, unit banks depending on those areas may incur severe losses and actual collapse may follow, whereas the losses incurred by branch banks in depressed areas may be offset by profits earned by branches of the same banks in more prosperous areas. For example, the chronic depression of sections of American agriculture even before 1929 was one of the causes of the hundreds and hundreds of small bank failures that seemed so incompatible with the general prosperity of the United States at that time. In the same years the English branch banks were incurring heavy losses in the Lancashire cotton industry but, thanks to their other business in more prosperous parts of the country, their cotton losses were not of sufficient weight to break the English banks. If, in the inter-war period, we had had unit banks confined to the depressed areas it is inconceivable that the English banking system as a whole could have avoided serious internal crisis.

So far the advantages have weighed heavily in favour of the branch banking system. But we must recall here Adam Smith's celebrated dictum, 'The division of labour is limited by the extent of the market'. The market for the services of a particular bank is not necessarily limited by

national frontiers; but there are substantial disadvantages once the frontier is crossed. Not only are language and monetary units different, but also commercial law and trade customs vary greatly from one country to another, and for these reasons banks generally do well to confine their main operations to one country. Where they have overseas business it is generally conducted by subsidiary companies having more or less independent managements. Within a country it is often suggested that market conditions are in fact so localized that unit banks are more useful than branch banks. It is said in particular that the local banker will have direct personal knowledge of the local business men, and will know which of them have, and which have not, the aptitude for business and the soundness of moral principles desirable in a borrower. The old English private banker, it was sometimes argued, knew all the family histories and would know therefore which young business men were worthy of assistance. Against this it may be suggested that the argument works in the opposite direction—family history is not an invariably good guide to credit-worthiness, and the individual banker may have been too unwilling to refuse a loan to the incompetent or dishonest scion of a family with which his father and grandfather had been on intimate social terms. The English branch banks of today have perhaps learned to get the best of both worlds in this matter. They encourage their employees to mix with the local clients on the golf course, and select and pay them accordingly. The local manager may then acquire personal knowledge, approaching that of the old individual banker, of his clients and their families. At the same time the remoteness of Head Office and the local manager's subjection thereto enables him, when he has to refuse a loan, to do so without the social awkwardness that might arise if he took sole responsibility for the decision. The local manager can always place his personal knowledge of a client at the disposal of Head Office, and, if there is occasion to refuse a loan, he can

always thrust the unpleasant onus on to that remote abstraction 'Head Office' without jeopardizing his social contacts with the client.[1]

The advantages are thus overwhelmingly in favour of the branch banking system, and the more primitive banking systems of the world are therefore likely to develop in that direction. In the United States the normal course of development has been impeded by legal restriction and political prejudice. In India, the most important other country where banking is predominantly in the hands of unit banks, there are special obstacles analogous to those which hinder the spread of banks beyond international frontiers, and we shall return in a later chapter to some discussion of this special case. Over the rest of the world development of banking systems appears to be bringing them more and more closely in line with the structure of commercial banking that exists in England and the Dominions. There is accordingly some justification for treating this structure as the general case, giving separate attention to the American system as something exceptional.

II. *The Bankers' Clearing House*

Among the functions of commercial banks enumerated above there was an item, the transfer of bank deposits from one person to another. If there is a system of branch banking the transfer of a deposit of a Mr. A in London to the account of Mr. B in the Oxford branch of the same bank is simple enough—the entire transaction is internal to the bank concerned. A system of unit but corresponding banks manages to achieve almost as great simplicity—pro-

[1] I should perhaps add that the ideal branch manager will leave his client neither with the impression that he (the manager) has himself been so odious as to refuse the advance, nor with the impression that it is useless to talk to the local manager when the advance will in the end be refused by a remote and unsympathetic Head Office. Rather the local manager should persuade the customer that his projected enterprise (occasioning the request for a loan) is too risky and that the whole matter should, in the customer's own interest, be dropped.

vided, of course, that the banks in the two places are corresponding banks. But when the debtor and creditor—the drawer and the payee of the cheque—bank with unconnected banks this simplicity disappears. When A, who banks with Barclays, writes a cheque in favour of B, who banks with the Midland, how is the deposit actually transferred from one to the other?

The connexion between the two banks is made by the *Bankers' Clearing House*. The business of 'clearing' inter-bank indebtedness in London is distributed between two parts of the London Clearing House, which deal with Town (i.e. City financial district) and General (i.e. remainder). There are also Clearing Houses in the great industrial towns in the provinces, dealing with local cheques, and less formal arrangements in every other large town. We may, however, confine our attention to the London Clearing House, and ignore its internal divisions.[1]

Every day individuals all over the country are sending cheques drawn on their accounts at one bank to people who bank with other banks. There will be a continual stream into each bank of cheques drawn on each of the other banks. These cheques constitute claims to deposits in these other banks, and the bank receiving the cheques is, therefore, becoming a creditor of each of the other banks. At the same time, each one of the other banks will have been receiving cheques, paid in by its own customers to be added to their accounts, drawn on the bank we have been considering. To the amount of these cheques, the first bank will be running into debt with the other banks. They have claims against it to the amount of the cheques. All these cheques that have found their way into the other banks are collected twice a day and taken to the Clearing

[1] These paragraphs give the general principles only. The reader may consult Truptil, *British Banks and the Money Market* for a detailed account. Since Truptil wrote, the old division of the London Clearing House into Town, Metropolitan, and Country has disappeared. The new 'Town' clearing covers most of the former 'Town' clearing and 'General' now covers all the rest.

House. There Barclays Bank, for example, will find itself in debt to each of the other banks as they present cheques drawn on Barclays and paid over their counters; and Barclays will, on the other side of the account, be presenting each of the other banks with cheques drawn on them. The various amounts are added up and offset against each other. Barclays may then find that it has paid a million pounds more on Lloyds cheques than Lloyds has paid on Barclays cheques. They exchange cheques and Lloyds remains a million pounds in debt to Barclays. Suppose with all other banks both these banks find their debits and credits equal, then Lloyds settles the account by drawing a cheque on its own deposit in the books of the Bank of England. Actually each day's transactions will be rather more complicated than this; but the essential process is clear enough—inter-bank indebtedness arising from transfer of deposits from one person to another is offset as far as possible; and any remaining balances are covered by transfer of Bankers' Deposits at the Bank of England.

In our example the position after the particular clearing will be that Lloyds deposit liabilities to the public will have decreased by one million pounds (its customers having received a million pounds less from customers of other banks than they have paid to them), and on the assets side its 'cash at the Bank of England' will also have gone down by one million pounds. Barclays deposit liabilities to the public will have risen by one million pounds and so will Barclays 'cash at the Bank of England'. The *aggregate* bank deposits in the country will not have been affected by the operation; nor will the aggregate of 'cash at the Bank of England' ('Bankers' Deposits' as they are generally called). The entire process is a transfer having no monetary significance. The general run of banking business in the country will normally lead to these transfers being small and purely temporary; but if there arises a pronounced tendency for people to bank less with Lloyds and more with the Midland, there will be a continued decline in Lloyds deposit

liabilities and equally in its cash reserve. The equal absolute fall in the two figures implies a fall in the ratio of cash to deposits in Lloyds Bank, and a pronounced movement of this kind would oblige the losing bank to curtail its general lending operations sooner or later. But of the significance of the cash ratio more anon.

III. *The General Control of Banks over Deposits*

We have seen in Chapter I that Bank Deposits are simply entries in the books of banks, saying that persons and corporations have such and such a claim against the banks. These promises are considered by the holders to be balances of general purchasing power. As long as people can be induced to accept these bank liabilities in exchange for assets which they surrender to the bank (including their own claim to money in the future) the banks can create deposits simply by acquiring more and more assets. These assets are then held as 'cover' for the bankers' liabilities to the public. The general nature of the assets actually held by the banks in England and the United States is apparent in the tables on p. 30 which are taken from aggregated balance-sheets covering most of the banking resources.

The absence of equality between assets and liabilities in the English table is due mainly to the exclusion of shareholders' capital on the liabilities side and the item Bank Premises, &c., on the assets side. These items have also been excluded from the American table, which also excludes the large items of inter-bank indebtedness arising from the correspondent bank system. The items given are those variable items which are of great monetary significance. The division of deposits in both tables is due to the arrangements with customers about the liability of the banks to exchange deposits on demand. Deposits on Current Account in England and Demand Deposits in the United States are subject to transfer or cashing by cheque at sight. The deposits on Deposit Account in England and

Time Deposits in the United States are exchangeable nominally only after some notice has been given. For some purposes the two classes must be considered separately, and the distinction is discussed in some detail in Chapter 10; but as customers can convert one class of deposits into the other without the banks taking any action (bank action only affects total deposits) it is permissible to take the total figures for this first approach to the problem of commercial bank operations.[1]

SUMMARY OF LONDON CLEARING BANKS' FIGURES

Dec. 1949
(£ millions)

Liabilities			*Assets*	
Deposits:			Cash in hand and at the Bank of England	532
Current Accounts	4,161		Money at Call	571
Deposit Accounts	2,041		Bills discounted	1,109
Total		6,202	Treasury Deposit Receipts	793
			Advances	1,523
			Investments	1,512

UNITED STATES—ALL INSURED COMMERCIAL BANKS

30 June 1949
($ millions)

Liabilities		*Assets*	
Demand Deposits	81,000	Loans	41,000
Time Deposits	36,000	Investments	62,000
		Cash reserves with Reserve Banks	17,800
		Cash in vault	2,000

The item Government Deposits does not appear in the English table as the British Government's balance is held by the Bank of England, which is excluded from the table. In comparing the assets sides of the two tables it is conve-

[1] This chapter must accordingly not be considered as exhaustive, even in an elementary way. All the conclusions are subject to modifications suggested in later chapters.

nient to think of the Cash in hand and at the Bank of England as equivalent to the American item Cash Reserve with Federal Reserve Bank. Strictly the Reserve with the Federal Reserve Bank is paralleled by Cash at the Bank of England only, as the American banks have also to hold 'cash in vault' (notes and coin). But the 'cash ratio' to which the American banker is bound by law to attend is the ratio of his deposit at the Federal Reserve Bank to his deposit liabilities to the public, while the cash ratio to which the English banks customarily attend is the ratio to deposits of their reserves at the Bank of England *plus* their till money. As we shall see that these 'cash ratios' are of great significance, we can conveniently take as comparable the English banks' cash in hand and at the Bank of England and the American banks' Cash Reserves with the Reserve Bank. Should we wish to compare the profitability of banking in the two countries we should, of course, have to remember that the American item does not exhaust the list of non-earning assets; it would be necessary to take account of cash in vault.

In comparing the two tables it will be noticed that the distribution of assets is quite different in the two countries. In England loans of various kinds formed a much larger proportion of the total than they do in America, whilst cash, for instance, was much lower. We should find other differences if we were comparing, say, Australian and Canadian figures. The distribution of banking assets varies greatly from country to country, according to the structure —or absence—of the money-market, the wealth of the business classes, and the general commercial and industrial structure of the country. Arguments given in terms of English banking methods can be applied to other systems only when appropriate modifications of the argument have been made. We shall return in Chapter 9 to certain outstanding problems of the distribution of banking assets.

In the English table, *Cash in hand* means Bank of England notes and coin in the tills and vaults of the commercial

banks. *Cash at the Bank of England* means a book entry, a deposit in the Bank of England in favour of the bank. It should be noticed that the combined cash item therefore consists, apart from the unimportant part which is coin, of liabilities of the Bank of England. The cash reserve thus consists fundamentally of central bank I O Us. In the American table the same fact is obvious. *Money at call* means loans to certain firms in the City, loans which are repayable nominally on demand. The banks have in the past given deposits to these firms in exchange for their promises to repay at call or short notice. The firms will have paid away the greater part at least of the deposits to other people; if they are called upon to repay they must in some way or other obtain command of deposits which now stand in other people's names. *Bills discounted* are virtually I O U s (or post-dated cheques) which the banks have bought. The banks hold these pieces of paper, having given for them deposits. At the due date (i.e. at the maturity of the bills) the drawers of the bills are under obligation to provide bank deposits to the face value of the bills. The bill of exchange is therefore a particular type of promise to pay, and the item Bills Discounted represents loans to people who have drawn the bills. A large part of this total represents *Treasury Bills*. Since 1941 there has been a closely related item, *Treasury Deposit Receipts*, representing direct loans to the Government, repayable after five, six, or seven months. *Advances* are the better-known loans —usually in England on the overdraft system—to industrialists, professional men, and others. The banks allow the business men to pay deposits to other people on the understanding that they will, at the end of three months or so, obtain deposits for repaying the bank if called upon to do so. *Investments* are long-term securities, especially British Government and other Empire government securities. When a bank buys a *new* government security it places at the disposal of the government a bank deposit. When it buys an *old* security through the Stock Exchange it places

a deposit at the disposal of the person who has sold the security.[1]

All these assets, except cash, bring some income to the bank. They are 'earning assets'. The desire to maximize profits would therefore seem to give banks an incentive to increase the supply of money without limit. But this urge is restrained by their need, in order to maintain the confidence of their customers, to maintain a considerable degree of *liquidity*. We observed earlier[2] that liquidity broadly means 'capacity to produce cash on demand for deposits', and it follows that 'cash' itself is the perfectly liquid asset. The desire for immediate profit encourages the banker to minimize his cash holding, but his desire for liquidity (based on a longer view of profit-earning capacity) encourages him to maximize his cash holding. These conflicting forces, in the course of the evolution of the English banks we know today, led to a convention that a 'cash ratio' (ratio of cash to deposits) of ten or eleven per cent. was proper. In the first four decades of the twentieth century this conventional ratio was to an important extent illusory, the published figures of most banks being subject to 'window-dressing', but since 1946 a true cash ratio of eight per cent. has been established and the banks actually work very closely to this figure.

Among the other assets (the 'earning assets') there is the same conflict between the desire for immediate profit

[1] As this is sometimes a point of difficulty it may be as well to summarize the proceeding. Lloyds buys a bond through the Stock Exchange paying, say, £1,000 for it with a cheque on its balance at the Bank of England. Mr. A has sold the bond and directly or indirectly receives the cheque for £1,000, and pays it into his account at Barclays. Barclays Total Deposits go up by £1,000, and when they present the Lloyds cheque to the Bank of England, through the Clearing House, Barclays cash goes up by £1,000, Lloyds going down by the same amount. Lloyds investments have gone up by the amount their cash has gone down, their deposits are unchanged, and Barclays are up by £1,000. If Mr. A banks with Lloyds then there is no redistribution of cash; but Lloyds investments and Lloyds deposits both go up by £1,000.

[2] See p. 22 above.

and the desire for liquidity, and in general the banker looks to earn most on his least liquid assets—higher income compensating for the risks that lower liquidity implies. The banker must have regard to his general liquidity position, and must therefore see that he has, besides cash, a reasonable proportion of the more liquid earning assets despite their lower earning power. The most liquid earning assets are the 'money-market assets'—Money at Call and Bills Discounted. A bank can, by refusing to renew short loans ('Money at Call') in the money market, force the borrowers to provide cash (which the borrowers in turn will have obtained from the Bank of England), and for this reason Money at Call is a highly liquid asset. Bills Discounted are nearly always within three months, and mostly within a month, of maturity (when they are due for exchange into cash) and in case of real need they can be sold to the Bank of England with little or no loss.

Treasury Deposit Receipts (a comparative novelty) are slightly less liquid. They run for five, six, or seven months, and are not marketable or exchangeable into cash by any money-market arrangement. The only possibility of 'encashment' before maturity is by discounting at the Bank of England, but as the official Bank Rate (more than one per cent. above the 'T.D.R.' rate) would be charged, a loss would be suffered by the discounting bank. The banks therefore regard the T.D.R. as appreciably less liquid than the 'money-market assets' we have just mentioned. Investments, being marketable on the Stock Exchange at variable prices, are still less liquid.[1] Last in the range of liquidity come Advances, because it is extremely difficult to shift a

[1] The nearer an investment (typically a government bond) is to maturity (repayment date) the less is its market price likely to diverge from its face value, and therefore the more 'liquid' is the investment. Bankers therefore like to hold among their investments a fair proportion of bonds near to maturity. The English practice is to have maturity dates fairly evenly distributed over the next 15 or 20 years; in the U.S.A. the proportion of short-dated bonds (say within five years of maturity) is nowadays much higher than in English practice.

mere promise to pay on to another bank—even when that promise is reinforced by 'collateral security'. An individual bank never wishes to drive a borrowing industrialist into the arms of one of its competitors, nor will the Bank of England relieve a commercial bank of such assets.

In present English conditions there are always available sufficient earning assets of these various types, attractive to bankers, to enable the banks to extend their commitments up to the hilt—the point dictated by the amount of their cash reserves.[1] The operative limiting factor in English banking today is therefore quite a simple one—the 8 per cent. cash ratio arranged between the Bank of England and the commercial banks at the end of 1946. This simplicity rarely obtains in other lands, and it has only recently been established in England,[2] but we can now with justification in the facts consider the very straightforward case in which the volume of bank deposits is governed entirely by the availability of cash and a straight 8 per cent. cash ratio as the relevant liquidity rule. The less simple cases, relating to other countries, will be more readily grasped when the simple present-day English system has been fully understood.

We assume, therefore, that the commercial banks have decided to maintain a stable cash ratio of 8 per cent., and we have to consider how the volume of bank deposits is regulated. As the banks, in their desire to add to their incomes, add to their earning assets, certain quantities besides the earning assets change. Total deposits increase, while the absolute cash reserve remains unchanged: the cash ratio therefore falls as the volume of deposits rises. This tendency is apt to be reinforced by the fact that as

[1] The position is *not* that every class of asset is readily expandible—the banks already fully meet the demand for business loans, and an increase in cash therefore cannot directly cause any change in these loans. The pressure will be confined to other classes of assets, with implications discussed in Chapter 7.

[2] As lately as the nineteen-thirties the English practice was more complex, and it was explained at this point in earlier editions of this book.

total deposits increase, prices and the total volume of transactions may sooner or later increase, causing an increase in the public's demand for notes, &c., in circulation. The public draws notes out of the banks, who find their *absolute* cash reserves falling while the total volume of deposits has increased. The cash ratio is thus subject to decline on two accounts—the increase in deposits and the drain of cash into circulation. Given the absolute size of the cash reserves in the hands of the commercial banks, there is a maximum appropriate total of deposits that leaves the banks with the conventional ratio of cash to deposits. The ratio being 8 per cent., and the cash reserves £80 millions, the banks can maintain deposits at £1,000 millions. If, with cash reserves of £80 millions, the aggregate deposits are below £1,000 millions, the banks can afford (and will be induced by the prospect of bigger incomes) to acquire more earning assets, raising the value of deposits from, say, £900 millions to £1,000 millions. Suppose, on the other hand, that cash is £72 millions when deposits are £1,000 millions, the banks in pursuit of their liquidity standards will sell some earning assets. Though each bank individually is striving for more cash to support the deposit structure, the commercial banks taken together cannot add to their cash, and the adjustment of the cash ratio is achieved by the decline in deposits resulting from the sale of earning assets to the public. When deposits have shrunk to £900 millions, the cash ratio will be at 8 per cent., and the banks will be satisfied.[1]

[1] In these figures it is assumed that the variation in total deposits held by the public does not cause any variation in the public's demand for cash. If, however (in the way indicated at the top of this page), an increase in the total of deposits causes an expansion in the total of business transactions (higher prices or higher volume or both), a cash surplus in the banks, leading to increased deposits, will be partly reduced by seepage of cash into circulation. Adjusting the first of the arithmetical examples given above, it may be supposed that as deposits rise from £900 to £950 millions, £4 millions of cash are absorbed into circulation; the banks will then have to stop expansion, as they will already be down to the 8 per cent. cash ratio. Correspondingly, if shrinkage of deposits forces

The banks, subject to the supply of 'cash' and the public's demand for cash, have absolute control over the volume of deposits. The fact that they maintain a fixed ratio simply means that they hand over to someone else the responsibility of determining the volume of deposits. That 'someone else' is the central bank. If the central bank can control the supply of cash and allow for the public's demand for cash for circulation, the volume of bank deposits is absolutely determined. If the central bank wants the commercial banks to be responsible for a certain amount of deposits, it has only to create the amount of cash for circulation which is appropriate to that level of deposits, *plus* the amount of cash that will give the commercial banks their customary cash ratio to that level of deposits—*always provided that the banks can be relied upon to maintain that cash ratio*. If the central bank wants the volume of deposits to increase, it must create more cash —the commercial banks can be relied upon to do the rest without overstepping the limits set by the central bank.

In the United States and in many other countries the cash ratio is subject to legal regulation, in that the commercial banks (or most of them) are obliged to maintain with the central bank deposits bearing a prescribed proportion to their own deposit liabilities to the public. As in such countries the law directs attention to the cash at the central bank only, the commercial banks are likely, in general, to be influenced by these cash reserves only and not, as in English conditions, by their total cash reserves. Their deposits are likely to be dependent on their cash at the central bank in the same way as the English bank deposits are dependent on the banks' total cash reserves, both being subject to the qualifications of the preceding paragraphs.

a shrinkage in the total of business transactions, the public's need for cash will be reduced, and the consequent return of cash from circulation into the tills of the banks would moderate the shrinkage of deposits necessary to restore the cash ratio.

In the United States the legal cash ratios are rather complicated. The present position[1] is that all member banks must hold with the Federal Reserve Banks reserves equal to 5 per cent. of their Time Deposit liabilities to the public, and 12, 18, or 22 per cent. of their Demand Deposit liabilities to the public. The 22 per cent. ratio for the latter class of Deposits applies to banks in New York City and Chicago, the 18 per cent. ratio to banks in certain other so-called reserve cities, and the 12 per cent. to all other banks. This classification of cities was historically based on the structure of the correspondent bank system. The contrast in ratios to be held against Demand Deposits and against Time Deposits, respectively, has been repeated in some but not all of the other countries that have followed the American system of imposing legal restriction. In England no such contrast is recognized, the agreed 8 per cent. applying as a flat ratio to all deposits. The distinction for reserve purposes between Demand and Time Deposits exists because these rules were originally applied in order to protect the public against banking illiquidity. It is obviously desirable, if the ratios are to be governed by possible public demands, to hold a higher cash reserve against deposits payable on demand than against those payable only after a month's notice. But the tendency nowadays is to regulate cash ratios not in the interests of banking liquidity but in the interests of central bank control over aggregate bank deposits. For this purpose a simple flat ratio is probably advantageous and, as we shall see below, a contrast between the Time and Demand Deposits' ratios may be actually a source of difficulty for the central bank.

In the United States and in most other countries the cash ratio has not been as stable as it has now become in England.[2] Where the cash ratio is subject to legal regula-

[1] 1 Dec. 1949.

[2] A stable cash ratio appears naturally only when there is great elasticity in the highly liquid assets available to the banks. In England this elasticity was provided by the discount market (supported by the Bank of England), an institution without parallel in the development of other countries.

tion the commercial banks have always liked to have some 'cushion' of excess reserves, in order to avoid the dilemma of breaking the law or seeking aid from the central bank, and ideas about a reasonable level of excess reserves have been somewhat flexible. More importantly, the actual cash ratio has been liable to variation because of variation in the availability of attractive earning assets. Owing to a shrinkage in the volume of trade, or a change in trading customs, bills of exchange may become scarce. Treasury Bills may, in time of peace, be much reduced in volume as a result of government financial policy. It may be that the banker could expand his holdings of the other earning assets to compensate for this shortage of the more liquid assets, but this would reduce his general liquidity. Similarly, the banker may have doubts and difficulties in maintaining or expanding his other (less liquid) assets—investments and advances. Under ordinary conditions banks are not likely to hesitate about adding small amounts to their Investments. But if a large cash expansion is going on and the banks fear that the prices of gilt-edged securities may fall before long they will, being profit-seeking institutions, be unwilling to enlarge their stake in a risky market. It will pay them to hold an unnecessary amount of the non-earning asset, i.e. cash, rather than acquire 'earning' assets the yield of which may well be lost two or three times over by a fall in the capital value of the securities bought. Similarly, they will ordinarily be lending to business as fully as they can without taking undue risks, and when the demand for Advances falls off they could maintain their amount only if they took greater risks of loss. For such reasons as these, banks may fail to expand their total assets (and therefore the total of bank deposits) in proportion to an increase in the cash base, preferring to allow the cash ratio to rise—that is to say, allowing big 'excess reserves' to appear. They may even (in the event of shrinking availability of attractive assets) allow the total of deposits to shrink when the cash basis has not fallen at all. This

phenomenon of varying excess reserves has been a very important one in the United States in the last two decades.

Another factor occasionally modifying the presumption that cash ratios will be stable arises from the relation between a bank's share capital and its liabilities to depositors. In the event of losses, a bank can still offer its depositors complete security of ultimate repayment if its capital and accumulated profits cover the losses. In taking up more earning assets a bank must remember that it is increasing the risks borne by its depositors, and that its capital (including undistributed profits) is the only cushion protecting depositors against these risks.[1] A cautious bank may therefore pay some regard to the proportion its total earning assets bear to its capital. It will be the more regardful of this point the more sceptical it is of the future value of assets available to it; and if this factor is operative, expansion of cash will not necessarily lead to the usual multiple expansion of earning assets and deposits. Banking literature of the last hundred years suggests that bankers' ideas on this matter are apt to be very elastic, and it seems probable that this check to credit expansion is generally of only slight account. Americans have worried about it often in the last two decades, and the Federal Deposit Insurance Corporation went so far in its report for 1936 as to say that it had adopted the principle 'in admitting banks to insurance and in rebuilding capital structures of banks, that no bank should be operated without a net sound capital equal to at least 10 per cent. of its deposits'. The '10 per cent.' rule went by the board in the war years, though the idea that there should still be some rule of the kind is still often voiced. In England it is a long time since this factor had any force; but there may well have been occasions when bankers have hesitated to add to particular

[1] The position will be more readily understood if the reader will remember that in a bank's balance sheet the total assets exceed the total liabilities to customers (depositors) by the amount of the capital and undistributed profits ('reserves'—not to be confused with 'cash reserves').

assets because of the extreme thinness of this protective cushion.[1]

With these reservations, not now important in England and of varying importance elsewhere, we can say that the commercial banks, in striving after the maximum profit consistent with safety and observance of law and custom, may be expected to regulate their operations mainly by the size of their cash reserves. The size of these cash reserves we shall find, in Chapter 5, to be under the control of the central bank. The cash ratio is therefore one of the main links in the chain of central bank control of the monetary situation. Rigidity of the cash ratio helps the central bank, by causing changes in the cash base to have automatic effects on the total of bank deposits. On the other hand, the reservations discussed above can operate as grit in the machine, impeding the efforts of the central bank.

[1] For example, in 1949, the great English banks perhaps hesitated to buy gilt-edged on a falling market because at balance sheet date depreciation would have made embarrassing inroads on their reserves. It is of course true that embarrassing publicity does not begin until secret reserves are exhausted, but effective embarrassment may begin before that point—even secret reserves have their limits.

3

THE DISCOUNT MARKET

1. *The Bill of Exchange*

IN the City of London there is a handful of highly specialized firms who comprise 'the discount market'. They work in close touch with the commercial banks —both those whose main business is in England and those whose main business is overseas—and with the Bank of England. They deal as principals in certain classes of financial assets, which they are enabled to hold mainly by continual but temporary borrowing from the commercial banks, who look to the discount market as the immediate outlet for any surplus cash—any 'excess reserves' as we might say. The financial assets held in the discount market are bills of exchange, Treasury Bills, and short-dated government bonds. Though bonds have, in fact, been dealt in by discount houses since the First World War, they became a recognized discount market asset only in 1934–5. The Treasury Bill since the First War has dwarfed the ordinary bill of exchange, but it was business in the latter that provided the foundation and shaped the ways of the discount market, and the bill of exchange must therefore take first place in this account.

A cheque of the ordinary kind is technically a Bill of Exchange payable at sight; but the layman can most readily grasp the nature of the Bill of Exchange if he considers it as a post-dated cheque. This is in effect what happens when a creditor, accepting a cheque, promises not to present it at the bank for a few days. Then John Brown has a claim against my bank on my account and receives payment on the due date. If he should want the money earlier he must find someone who will take the cheque (after he has himself endorsed it) to hold until the due date, and the man who provides the money may

deduct a small amount to compensate him for waiting till the due date.[1]

When our post-dated cheque is called a Bill of Exchange the due date is called 'maturity'. The process of handing round the endorsed bill in exchange for ready money before maturity is called 'discounting the bill of exchange'. The margin between the ready money paid and the face value of the bill (which is the amount payable by the debtor at maturity) is called the 'discount', and is calculated at a rate per cent. per annum on the maturity value.

Suppose that Thomas Debtor buys goods from John Creditor. Creditor wants his money now, but Debtor wants to postpone payment until he has resold the goods. They may agree to settle the transaction by Creditor 'drawing a three months' bill' on Debtor.[2] The form will be something of this kind:

London, 27th July 1937.

To Thomas Debtor,

Three months after date please pay to John Creditor or Order, the sum of One Thousand Pounds for Value received.

Signed: John Creditor.

Then Creditor is the Drawer of the bill and Debtor is the Drawee of the bill. Creditor sends the bill to Debtor who acknowledges his responsibility for payment of the thousand pounds at maturity by writing on the bill his 'Acceptance'. When the bill has been 'accepted' Debtor has for the time being closed the transaction. He simply has to be ready to pay a thousand pounds to any one who happens to own the bill three months hence.

[1] This paragraph is essentially a layman's description for other laymen; the commercial lawyer will find a looseness of expression which I think is defensible in this context. And the word 'waiting' in the last sentence will offend the post-Marshallian economic theorist. Strictly I should have written 'parting with liquidity'.

[2] Actually bills in the London market vary in currency from one to six months; but throughout the following pages the three months' bill has been taken as typical: the great majority of London bills are three months' bills.

As Creditor prefers immediate cash to a thousand pounds in three months' time, he takes the accepted bill to someone who has money to lend on such security. But Creditor does not *borrow* on security of the bill. He *sells* the bill—parts with all his interest in it—outright. Creditor has to endorse the bill to show that he has parted with his claim. His endorsement incidentally renders him liable to meet the bill at maturity should Debtor fail to do so. When Creditor sells the bill the financier who takes it from him pays not £1,000 but, say, £990. The £10 difference represents the interest on £990 for the three months which must elapse before maturity—the rate of discount would then be quoted as 4 per cent.[1] The financier has in fact exchanged £990 now for £1,000 (due from Debtor) three months hence, the £10 is his price for doing so, and the bill is legal evidence of his claim to the £1,000.

The bill is a convenient instrument because, like a government bond, it can change ownership conveniently during its currency. If the financier who took the bill from Creditor decided, after, say, a month, that he needed cash he could raise cash by *rediscounting* the bill. The bill would now represent a claim to £1,000 *two* months hence, and the spot cash price for it would (if the relevant interest rate is again 4 per cent.) have risen to £993. 6*s*. 8*d*. He would have to endorse the bill and would be responsible for meeting it at maturity should the other names on it fail. But, supposing all goes well, the transaction has closed as far as he is concerned and he has secured interest at 4 per cent. per annum for one month's loan of £990.

II. *The Structure of the Discount Market and its Traditional Functions*

The trade bill described above is a device for securing in a convenient form, and with clearly understood legal

[1] The arithmetician will notice here the difference between 'true discount' and 'commercial discount'—the rate of the latter being calculated on the sum payable at maturity.

safeguards, the financing of a transaction in goods which takes some time to complete. The importation of many foodstuffs and raw materials into England are transactions of this kind and are financed largely by the discounting of bills. Neither exporter nor importer has to go without his money while the goods are in transit, the money for the exporter being in fact provided by the *discount market*, until the importer has had time to resell the goods. If, as will generally be the case, neither the exporter nor the importer is a man whose name is recognized in the discount market as a credit-worthy name it may be difficult to secure money for the bill unless some firm of repute can be induced to guarantee the bill. It is worth paying some commission to secure a good name on the bill as the ease of discounting is much increased, and the appropriate rate of discount is lower. The specialist firms called the Acceptance Houses provide these guarantees, for which they charge commission. They maintain agencies in important trading centres abroad and make it their business to know the credit standing of various traders. Having ascertained that an American importer is credit-worthy the Acceptance House is willing to open an *Acceptance Credit* for him. The size of the acceptance credit will depend on the size of the importer's transactions and the Acceptance House's estimate of his ultimate resources. Suppose the credit to amount to £20,000. Then the American importer buys goods in England from an English merchant, the latter agreeing to take as payment a three months' bill for £15,000. The price of the goods may be called £15,000, but it is understood that three months' credit is given. Then the English merchant is advised by the American that the latter has a credit with such and such an Acceptance House. The English merchant then draws a bill, not on the American importer but on the Acceptance House. The Acceptance House has made itself liable to meet bills on the American's account up to the £20,000 limit. The bill is then sent to the

Acceptance House in London, which acknowledges its obligation by 'accepting' it. The bill can then be discounted readily by the English merchant (or his agent). It has a first-class British name on it and will be discounted at one of the lowest rates in the market. The Acceptance House has its own arrangements with the American importer, whereby the latter promises to meet the debts which he incurs. The bill itself is payable on maturity by the Acceptance House. For the use of its name in this way the Acceptance House charges a commission, and its receipts from commissions enable it to maintain in various commercial centres the credit intelligence service which is essential to the avoidance of bad debts. The Acceptance House must be recognized in London as having ample resources of its own for meeting all the obligations it incurs—otherwise its name on a bill would have no value and there would be no advantage in drawing bills on the Acceptance House.

Sometimes the arrangement between the debtor who has to pay ultimately and the Acceptance House is made indirectly through the debtor's bank. If the debtor is, say, an Argentine importer, he can induce his own bank in the Argentine to secure an acceptance credit for him in London, enabling him to tell his creditor to draw the bill on a great London Acceptance House. The Argentine bank makes itself responsible for the debt to the Acceptance House and makes its own arrangement with the final debtor, the Argentine importer. An acceptance credit of this type is called a 'Reimbursement Credit'. The Acceptance Houses and banks grant these reimbursement credits at particularly low rates (frequently $\frac{1}{2}$ per cent.) as all they have to do is to satisfy themselves about the soundness of the Argentine bank—a very much simpler matter than looking into the credit-worthiness of an individual Argentine importer. The Argentine bank will itself naturally make some charge to the Argentine importer; but the division of labour in seeking credit informa-

tion, between the London Acceptance House and the Argentine bank, may well lead to some reduction in the total cost.

The great London Acceptance Houses are able to combine these functions with a number of other financial transactions of one kind and another—the raising in London of long-term loans for overseas governments, for example. Frequently they are referred to as the 'Merchant Bankers'. Some of their names are among the best-known financial names in the whole world—Barings, Rothschilds, Kleinworts, Erlangers, Lazards, &c. The great joint-stock banks also have an extensive Acceptance business, which can be worked in easily with their ordinary banking business in the great commercial centres.

Once it has been accepted the bill is ready for discounting in the London discount market. The discount market consists of a dozen firms, including three large concerns that have long been public companies and nine smaller ones that have more recently grown from private partnerships into public companies.[1] In addition, there are three or four small firms called the 'running-brokers' who now do a little business of the same 'dealing' kind as that of the discount houses and also act as agents for some of the 'outside banks' and other customers. The typical and traditional work of a discount house is to borrow money from the banks and other institutions with money to lend on short-term, and use that money to buy and hold bills of exchange. They borrow from some ninety lenders in the discount market, including not only the ordinary English commercial banks but also a large number of foreign and colonial banks and the 'merchant bankers'.

The money that the creditor wants in exchange for his bill is thus provided by a discount house which has, on the

[1] The nine discount houses often referred to as the 'bill-brokers' are now all organized as joint-stock companies (each having a capital of at least £1m.), but the phrase 'companies' still clings, in discount market language, to the three original companies (the Union, the National, and Alexanders).

whole, found it by borrowing from a bank. The bank has put a bank deposit (a claim against itself) at the disposal of the bill-broker, and the bill-broker puts it at the disposal of the firm which has brought the bill along. These loans from the banks to the discount market are the most important part of the Money at Call which appears in the banks' balance-sheets. The traditional source of discount market profits (though now a mere drop in the bucket) is in the difference between the cost of these loans and the discounts earned on bills held. The discount houses borrow from the banks at call at very low rates of interest in order to discount bills at rates which are in general rather higher. When a bill-broker takes up a three months' bill he does not secure the necessary money by borrowing for a term of three months. He finances his holding of the bill by borrowing from day to day.[1] The trouble of getting loans renewed, the risks of not having them renewed, and so forth, are compensated by the low rate of interest at which the banks will make these short loans. After a bill-broker has taken up a three months' bill at, say, 3 per cent., relying on securing his short loans from the banks at 2–2½ per cent., the cash reserve position of the banks may change, forcing the banks to curtail their short loans, rates on which may rise sharply—perhaps to 4, 5, or 6 per cent.[2] If this goes on for long the bill-broker, far from having made a profit, will have incurred a loss as a result of having discounted that particular bill. He must, therefore, when discounting a bill make up his mind about the prospects of call and

[1] Most of the money is nominally at call, but the large part which comes from the major banks is in fact allowed to run on uncalled week after week. Marginal amounts called 'overnight money', supplemented if necessary by small amounts of 'privilege money', can be obtained from some of the larger clearing banks, and a large proportion of the overnight money and all the privilege money would automatically be repaid the next morning.

[2] Such a big change as here supposed could only take place with a rise in Bank Rate—an event that has not occurred for many years but is, of course, not ruled out.

short money rates throughout the currency of the bill. The market rate of discount today for three months' bills will be dependent not only on short money rates today but also on their prospective levels throughout the next three months.[1]

What will happen if all the banks are calling in loans from the discount market? How will the discount market be able, at any rate of interest, however high, to secure the funds for paying off the banks? Some bills will be maturing each day, and the bill market could conceivably raise some money by not taking up fresh bills as the old bills mature. But this may not be sufficient to provide the requisite amounts. Then what happens is that the bill market goes to the Bank of England which traditionally will always help the bill market, *at a price*. The Bank of England will rediscount bills for the market, but at a rate of discount of its own choice. Nowadays the Bank always rediscounts at the market rate (about ½ per cent. for Treasury Bills) of which it approves; but it retains its traditional right to charge the official Bank Rate (or to *lend*, as it used frequently to do, at an 'Advances Rate', ½ per cent. above Bank Rate). The fact that they may have to go to the Bank of England for help (even though under the present system they know they will be helped at a lower rate than Bank Rate) makes the discount houses careful to hold their operating rate at a level approved by the Bank of England. The market knows that cash will always be forthcoming to enable them to meet calls from the banks who are its normal suppliers of cash, but it also knows that the price at which the cash will be forthcoming is a price chosen by the Bank of England.

This use of the Bank of England as a last resource is

[1] The rates mentioned in this paragraph are purely illustrative, and are retained from earlier editions of this book simply because they (and the differences between them) are more readily grasped than the fractional rates prevailing nowadays. Throughout this section the reader should remember that the traditional business in bills of exchange is now only a small part of the market's business.

limited in a way that has important effects on the rates at which various classes of bills can be discounted on the market. Historically in order to guard itself against bad debts the Bank of England has certain rules restricting the classes of bills of exchange which it will rediscount or which it will accept as security for advances to the discount market. Among ordinary bills of exchange such as have been described above the Bank will only countenance bills bearing at least two good British signatures, one of which must be that of the Acceptor. The fact that a discount house can go to the Bank of England in the last resort only with bills of exchange that satisfy this condition makes the discount market prefer such bills. This preference is shown in the lower rate of discount at which these bills can be discounted. As a bill accepted by a great Acceptance House or British bank would ordinarily fall automatically in these classes of 'eligible bills' (bills eligible for rediscount at the Bank of England) the value of the Acceptance House's signature is patent.

In handling the ordinary commercial bills of exchange (of which the total in the market nowadays is of the order of £150m.) the discount houses render important services as intermediaries between the originators of the bills and the commercial banks which often own the bills at maturity. The banks like, for the sake of liquidity, to have their bills arranged in order of maturity, a certain proportion falling due each week. They do not particularly want the trouble of acquiring a lot of small bills, but prefer buying large 'parcels' of bills from the market, the parcels being of amounts and maturities which the banks happen to want at the moment. A discount house having a parcel of the amount and maturity which a bank is wanting will not borrow from the bank (leaving the parcel as security) but will take the bills to the bank for rediscount. The discount house parts with the bills for ever and takes 'money down' in exchange. It has sold the bills to the bank. The discount house that endorsed the bills remains in law liable

to meet the bills at maturity should the acceptors, the drawers, and any previous holders default. Otherwise its interest in the bill ceases. The rate of discount at which the bank takes the parcel will, *ceteris paribus*, be less than the average rate at which the discount house discounted the various bills in the parcel. The margin between the two rates may be regarded as the interest and risk premium covering the period of holding the bill, plus a commission paid by the bank to the discount house for having collected just the classes and maturities of bills which the bank was wanting to balance its portfolio, and in some slight degree for the discount house's name having been added to the list of people from whom the maturity value of the bill can, if necessary, be claimed. When the bills coming into the market were infinitely varied in credit standing, in maturity, and in maturity value, these margins between rates were an appreciable source of the discount houses' income.

It should be added that an English joint-stock bank never parts with a commercial bill it has once taken.[1] Once a bill of exchange finds its way into a joint-stock bank it rests there until maturity. Unless the custom existed the banks might not be so willing to leave to the discount houses the sifting out of attractive maturities. The banks used to prefer to hold bills with not more than about two months to run to maturity, and in these circumstances an important function of the discount houses was to hold bills for the first month or so of their currency, selling them to the great joint-stock banks as, with lapse of time, they became shorter-dated paper. Under some circumstances there is a more lively demand for shorter-dated paper, and then discount rates are lower for, say, two months' bills than for three months' bills. This difference of rates allows the discount houses to earn on the

[1] This custom used to apply equally to Treasury Bills, but since 1938 sales of Treasury Bills by joint-stock banks have been increasingly frequent, in the context of Bank of England operations to help the market (see pp. 112–14 below).

paper they hold rates that are above those prevailing for three months' bills. To give an extreme case,[1] suppose the three months' rate is 5 per cent. and the two months' rate is 3 per cent. The discount house pays at the outset £987. 10s. for a three months' bill (£12. 10s. = 1¼ per cent. on £1,000 = 5 per cent. per annum). At the end of a month it resells the bill to a bank at 3 per cent.—i.e. at £995 (3 per cent. per annum = ½ per cent. for the two months; ½ per cent. of £1,000 = £5). Then the discount house has earned £7. 10s. on a loan of £987. 10s. for one month, which is at a rate of about 9 per cent. per annum—which would probably leave it a good margin over the rate at which it took short loans from the banks. This profit will be increased if rates have moved downwards during the first month, and decreased if rates have moved upwards. In circumstances of varying discount rates, such profits as these can make an important contribution to the discount houses' income.

III. *The Treasury Bill*

The commercial bill we have been discussing so far is a device for raising money on goods during their transit from one place to another. Such a device could hardly be well established without people realizing that a bill might be used for the borrowing of money without any goods being in transit at all. Such bills are called 'finance bills', and they vary in quality from the perfectly good finance bills that used to play an important part in the mechanism of the foreign exchange market to the semi-fraudulent paper put out by any hard-pressed debtor. The ease with which the finance bill can be exploited by needy borrowers led to the leading houses avoiding such paper, and the change in the mechanism of the foreign exchange market has somewhat reduced the scope for finance paper, so that ordinary finance bills are not common nowadays. But a

[1] The figures given here are highly artificial and are designed to ease the reader's mental arithmetic.

particular kind of finance bill put out by a needy borrower is nowadays the most common bill in the discount market. This is the Treasury Bill. The Treasury Bill is a mere promissory note of the British Government. In exchange for deposits at the Bank of England the British Government gives a written promise to pay 91 days later a sum of £5,000 or £10,000. The form of the Treasury Bill leaves a space for the creditor's name; but the sum is payable to 'Bearer' if no name has been entered, and most of the bills the market handles are generally left as Bearer Bills. This would be unthinkable with ordinary commercial bills where the addition of each signature adds to the security. But the Treasury Bill is a promise of the British Government, and no discount house or bank signature can add to that security. The unquestionable security makes it possible for them to pass round the market as Bearer Bills without anyone hesitating to take them up if he has money to lend. The advantage to the Government of this form of borrowing is that it is, on the average, cheaper than long-term borrowing. The creditor can lend his money for only three months and know exactly what sum he will then have available. For such highly 'liquid' security the lender will lend at rates generally appreciably lower than those he expects when he ties up his money for years (subject, of course, to the possibility of selling on the Stock Exchange, perhaps at a big capital loss). As we shall see in Chapter 5, the existence in the market of large amounts of Treasury Bills facilitates control by the central bank, for the Treasury Bill is an ideal security for the central bank to buy and sell. And the market itself is pleased enough to have Treasury Bills, especially when, as has been the case since 1929, the supply of commercial paper[1] has been so scanty.

[1] 'Commercial paper' is here used in the London sense of any bill having its origin in a commercial transaction—in contrast to 'government paper'. In New York and therefore in Section V of this chapter the term 'commercial paper' has another connotation.

The Treasury Bills are issued partly by 'tender', partly 'through the tap'. The tap issue is to government departments that have funds in hand and to certain overseas monetary authorities. The government departments include, besides the ordinary departments of State, the Government savings banks, the statutory insurance funds, the Bank of England Issue Department, and the Exchange Equalization Account. The rate of discount at which they are issued through the tap is unknown and is irrelevant to the discount market. The tender issue is offered to the discount houses, the banks (including many Commonwealth and foreign banks), and anyone else who likes to apply through either of those channels. The Government invites these firms to offer a price, to be paid on some day in the following week, for every £100 that the Government will pay to them at the Bank of England exactly three months later. If a discount house is willing to take Treasury Bills at, say, 10*s.* 8*d.* per cent. per annum, it tenders on Friday for the amount it is willing to take (say, £100,000) at a price £99. 17*s.* 4*d.* per cent., specifying that it will take up the bills on, say, Tuesday. On Tuesday it must pay into the Government account at the Bank of England £99,866. 13*s.* 4*d.* Thirteen weeks after that Tuesday the Government will pay to the discount house £100,000 against surrender of the Treasury Bills.

The tender issue is made every week and the amount offered is now (early 1950) of the order of £200 millions each week. Before the introduction of Treasury Deposit Receipts the Treasury Bill issues used to be varied continually in order to offset variations in other government receipts and disbursements. At the peak revenue season (January to March), for example, the Treasury Bill issues would be reduced, maturities of old bills being allowed to exceed the weekly offer; on the other hand, a big bond maturity or excess government expenditures might dictate a temporary expansion of the Treasury Bill issue, new bills issued exceeding maturities of old bills. When the Treasury

Deposit Receipts became large in amount they were made to absorb these fluctuations in the government's financial needs, the Treasury Bill issues becoming stereotyped. Since the end of the war, there have been two phases of progressive reduction in the amount of Treasury Deposit Receipts. The second of these phases has reduced the Receipts outstanding to so small a total (relatively to the ups and downs of government payments) that it seems likely that the Treasury Bill issue will have once more to become the effective buffer.

The procedure has now become highly conventionalized and there are close understandings between the banks, the discount houses, and the authorities as to the rates at which Treasury Bills will be taken up. The clearing banks—the ordinary English commercial banks—do not tender for Treasury Bills but obtain all they want from the discount houses after the latter have held the bills for at least a week. The discount houses are formed into an Association, and members of the Association tender at an agreed price corresponding to a rate of discount of about 10*s.* 6*d.* per £100 per annum.[1] The total amount of bills tendered for by the discount houses bears a very large proportion to the total offered in each week, but there is always also a large 'outside' tender, by certain overseas banks and others outside the London Clearing Banks' group, and by the Bank of England (operating both as an agent for others—e.g. the Federal Reserve Bank of New York—and on account of its own Banking Department). The outside tenders are generally at prices a shade above the Association's price. Generally, the outside tenders are accepted in full, and the associated discount houses get the rest (their price being a shade lower—i.e. their discount rate a shade higher). Every discount house finds its allotment bears the

[1] The concerted tender is recognized by the Bank of England. It is often referred to as tender by 'the syndicate', the use of this word originating in successive arrangements between a number of discount houses in the nineteen-thirties.

same proportion to its tender—sometimes a high proportion, sometimes a low one, according to whether the outside tenders (at the cheaper rate) are low or high. The Treasury each week announces the *average* price at which it has placed the week's offer of Treasury Bills—and the higher the proportion allotted to the discount houses, the nearer is this average price to the Association's price.

In the early days after a Treasury Bill has been issued—when it still has nearly three months to run—it is called a 'hot' bill. Any time after it is seven days old one of the big banks may buy it (at the discount rate of $\frac{1}{2}$ per cent. per annum—a few pence less than the original tender rate), but most of the bills stay with the discount houses for at least three or four weeks. After that the banks more and more eagerly buy them, and few of them remain in the portfolios of the discount houses right to maturity. While they are held by the discount houses, the bills are used by the discount houses as security for the money that they borrow at call, &c., from the banks. For this money they have to pay $\frac{1}{2}$ per cent. so that, whether they sell the bills early or late, their profits on all Treasury Bill transactions are nowadays absolutely trivial. The phrase 'turning an honest penny' trips off a bill-broker's tongue with unusually literal justification. Even when allowance is made for the number of hundreds of pounds upon each of which a few pence is earned (the allotment to the Association is of the order of £150 millions each week) the earnings of each firm from Treasury Bill dealings is at present very small.

IV. *Short Bonds, and the Present Position of the Discount Market*

In the Great Depression of the nineteen-thirties, the total value of commercial bills outstanding at any one time dwindled to a hundred millions or so, and the market's margin on Treasury Bills became insignificant or even negative. In these circumstances the discount market turned, in an attempt to earn a reasonable living, to operat-

ing in short-term government bonds. Some of these bonds are issued originally with short lives—one-, two-, or five-year Exchequer Bonds, for example. Others are bonds that have originally had a much longer life—a 20-year War Loan or Conversion Loan, perhaps—but become 'short bonds' as they approach maturity. When these longer-term bonds are within a year or two of maturity, they have little appeal to the ordinary investing public, as new purchases; and though most holders will continue to hold them until maturity, some will always through various circumstances (death, bankruptcy, alternative investment attractions, &c.) be coming on to the market. As maturity approaches it is worth the while of financial institutions such as discount houses to offer an attractive price to obtain securities which, while not as liquid as three-months' bills, are absolutely firm claims to cash payment in a reasonably short time and will at such a price yield a return of (at present) one or two per cent. per annum.[1] Using the bonds as collateral security, the discount houses are able to borrow money at call or short notice at $\frac{5}{8}$ or $\frac{3}{4}$ of one per cent., so obtaining a profit margin which (on the scores of millions of pounds carried) makes a comfortable contribution to the income of the discount market.

At first this development was thought a dangerous one, and it depended much on the funds that discount houses were able to borrow from the 'outside' banks—the foreign and colonial banks, and other financial institutions not primarily concerned with banking in England. But with the growing weight of government debt operations in the rearmament and early war years, the authorities realized that this new business of the discount market could facilitate the big official operations in course and in prospect. The chief objection to the business was that, the bonds

[1] The price offered by a discount house will be higher than that offered by any 'ordinary investor', since the latter cannot finance his holding by cheap 'money at call'.

being much less liquid than bills, there was a risk (if only remote) of large loss if the discount houses had to sell their bonds before maturity in a period of rising interest rates.[1] The Bank of England therefore took the view that the capital structure of the discount market should be strengthened, and that once this had been done the bond dealings of the discount houses might be benevolently regarded as long as it was confined within reasonable limits. Some of the smaller houses were amalgamated and there was a general move to increase capital; and the present position is that every one of the twelve discount houses (i.e. excluding the running brokers) has a capital of at least a million pounds.[2] Bond dealings are regarded as a legitimate activity, the great English banks as well as the 'outside institutions' regularly lend money to the discount houses against bonds, and there is no doubt that in an emergency the Bank of England would be prepared to do the same.

This official benevolence is entirely dependent on observance of reasonable limits. These relate to the total sum that may be used by a discount house in this way and to the length of life of the bonds that may be held by discount houses against borrowed money—both limits to which prudence in the discount houses themselves would anyway point. It is understood that the limit of amount is

[1] Taking a crude arithmetical example: if, when a one-year 1 per cent. bond has just been bought at 100, the rate on one-year bonds rises to 2 per cent., the market price of the 1 per cent. bond will fall to about 99 and (rates continuing at the new levels) it will (ex-dividend) steadily rise to 100 at the maturity date a year later. If the discount house has to sell the bond in the early months (though not if it can hold to maturity) its capital loss will greatly exceed any net yield it has obtained. This example is only a crude one, because in practice considerations of dividend dates and taxation rules will greatly affect the arithmetic of profit and loss.

[2] The consolidation of the discount houses came in two distinct phases, the first occasioned by the recognition of the implications of the bond business in the thirties and the second by the desire of the authorities to see the discount market playing a very special part in the operations of war finance. For the sake of simplicity these two phases have in the main text been telescoped into one.

about ten times the true capital resources of the discount house concerned, and that this total must be very heavily weighted by the shorter bonds. After a period when (partly because of the abnormal loan requirements of the government) the time limit of the 'maturities' that might be held was somewhat elastic, the prevailing view now is that a bond with a life exceeding five years should not be held against borrowed money.[1] A discount house will, however, hold only a relatively small amount of bonds having anything like as long as this to run, and very much more than half of its portfolio will *ordinarily* consist of bonds maturing within two years, and the remainder will have their maturities as carefully (but not evenly) spread over the remaining years as the technical availabilities of government bonds allow.

The bonds thus held against borrowed money yield to the discount houses a comfortable margin contributing the bulk of their incomes. The bonds yield rates ranging (in January 1950) from about 1 per cent. for one-year bonds to about $2\frac{1}{4}$ per cent. for the five-year bonds which are the longest the market will hold. With the portfolios heavily weighted by the predominance of the shorter dates, the average rate earned must be nearer one than two per cent. Against this the discount houses have to pay $\frac{5}{8}$ or $\frac{3}{4}$ per cent. for the money borrowed on security of the bonds. Most of the money comes from the outside banks, is at $\frac{5}{8}$ (sometimes $\frac{1}{2}$ or $\frac{3}{4}$) per cent., and is (in form) at call. Smaller (but still considerable) sums are borrowed from the great English banks and the Scottish banks, mainly at $\frac{3}{4}$ per cent. Of the latter, some is not at call, but is lent for a fortnight or a month (and is called a 'fixture'). The precise net earnings of the discount houses cannot be worked out from these percentages, because a great deal depends upon fine shading in purchase prices, upon Government

[1] I add the qualification 'against borrowed money' because it is regarded as legitimate for a discount house to invest its own capital in longer-dated bonds.

[library stamp]

decisions as to date of repayment,[1] and upon the highly complicated incidence of taxation. It is, however, abundantly clear that the short-bond business, though the newest comer among the discount market's activities, is the principal prop of the discount market's income.

What advantages are there from a national point of view in this practice? What is the social justification for the payment of the income thus derived by the discount houses? The answer is in large part to be found in the fact that even the longest-dated government bonds (but excluding the irredeemables) eventually become short-dated bonds, and therefore lose their appeal to the general body of investors who are looking for an investment to hold for an indefinite period of years. Given this fact, the Government wants *some* financial institutions to act as a magnet to take up bonds that are getting near to maturity. These institutions can also serve a useful purpose by acting more generally as 'jobbers' absorbing ephemeral market gluts of short bonds. Moreover, the exigencies of public finance may occasionally drive the Government to issue bonds which are short-dated at the outset. And if, for these purposes, there are financial institutions willing to hold short bonds, then the Government may as well, as a matter of policy, choose to issue some short-dated bonds and get the benefit of lower rates when these can be had (as had been the case through the nineteen-thirties and nineteen-forties). Given all these circumstances, it is very convenient to have such an adaptable and financially elastic institution as the London discount market to hold the bonds on the basis of funds that the banks like to regard as almost as liquid as cash (as indeed they are).

What would happen if there was no discount market? The banks would no doubt operate more than they do

[1] Many government bonds are repayable not (1) at one fixed date but (2) not later than a certain date, with a Government option to repay (at due notice) at any date after a certain earlier date. (Bonds of type (1) are listed as, for example, Exchequer Stock, 1955; those of type (2) are listed as, for example, War Bonds, 1954–6.)

nowadays in short bonds; but they would feel very uncomfortable about this and, to the extent that they failed to give adequate support to the short-bond market, the central bank as the instrument of government would feel obliged to operate a great deal in short bonds. This is more or less what happens in the U.S.A., where the Federal Reserve System operates on a large scale in short- and medium-term bonds, absorbing them particularly when the commercial banks are shy, and unloading when the commercial banks are more tempted. In this way the American short-bond market is even more stable than the London one. And it could be done in London: there are no insuperable technical difficulties. We must remember, of course, that there would have to be a few more technical experts and a few more clerks in both the commercial banks and the central banks.

Similar considerations apply to the question whether the Treasury Bills business handled by the discount market could be eliminated. The discount houses are a great convenience to the commercial banks. By their manipulation of their call loans to the market and by the readiness with which they can buy Treasury Bills of any date from the market, the banks are able to settle inter-bank indebtedness daily and to cope with the vagaries (expected and unexpected) of government payments and receipts, and to do all this without impairing their cash ratios. But differences arising in inter-bank indebtedness could be adjusted along lines similar to the dealings in 'Federal Funds' in America[1] and now that the old prejudice against direct dealings between the Bank of England and the joint-stock banks has gone, the latter could be insulated from the irregularities of government payments and receipts—all without the intervention of this specialized body of discount houses.

[1] Member banks short of reserve funds (cash reserves) acquire from those with surplus reserves immediate deposits at the Federal Reserve Banks, returning them a day or so later. The process is essentially one of exchanging 'cash today' for 'cash tomorrow'.

The liquidity of the commercial banks would *look* less, but since everyone understands the responsibilities of the central bank, liquidity would in fact be no less than it is now. Though the circumstances that gave birth to the discount market have in the main disappeared, its use for current purposes has its conveniences for all parties; and although on the score of its Treasury Bill operations there are no insuperable technical objections to the disappearance of the discount market, there is all the force of a tradition of great convenience and of adaptability to the changing needs of the times.

Nor must we forget that the discount houses retain a modicum of the kind of business on which they grew up and which they are peculiarly well suited to handling. This is the trade in ordinary commercial bills of exchange. There are something like £150m. of these now (1950) in the market, and it is thought that they may become more numerous in the near future. In handling these the discount house still performs the important services referred to on pages 50–1 above; and these could not be undertaken by the ordinary commercial banks without the expense of technical experts and clerks such as those now employed in the discount market. Again, we find that work now undertaken by the discount houses *could* be done otherwise, but it is difficult in this case (in contrast to the others) to see that it could be done more cheaply, and the commercial banks may well be right in saying that it is work so different from their main service that they prefer to take advantage of a body of outside specialist firms.

The historical justification for the existence of the discount market was this last service[1]—the handling of ordinary bills of exchange, and the strongest case that can be made out for the continued existence of the market is that

[1] Readers familiar with nineteenth-century history will appreciate that in the earlier period (especially before, say, 1870) the discount market also provided the extremely important service of channelling funds from one part to another of a predominantly 'unit' banking structure.

there is still some such work for it to do *and* that as we move to a world of freer international trade this business may return to something of its old dimensions. If the business does grow, there will be important and lucrative work for the discount market to do, and we should not lightly throw overboard institutions that may soon add a fair contribution to England's earnings in the world at large. This was the view taken by Lord Norman, one of the greatest of the Bank of England's Governors, and it was for this reason that the early frownings upon new ventures in the discount market gave way to official benevolence and encouragement in the process of strengthening and consolidation that took place some years ago. With the bond business that the strengthened discount houses have developed they have found a profitable living. It need not be supposed that a little convenience in using the old channels is dearly bought by the authorities at whose expense, directly or indirectly, the bond margins are earned. The discount houses engage the full-time services of no more than two hundred or so—including typists and messengers as well as managers and specialist clerks. When allowance is made for the fact that some of the work would, in some way or other, have to be done anyway, perhaps this is not a high price to pay for one of the technical pillars of London's position as a leading international financial centre.

v. *The New York Money Market*[1]

The structure of the London money market is unique. Nowhere else in the world is there such a well-developed market in short-term funds—money available for periods of a few days, weeks, or months. The leading Continental centres—Paris, Berlin, Amsterdam, &c.—have some institutions and credit instruments like those of London and have more or less developed markets for short-term funds.

[1] The uninitiated may advantageously leave this section unread until Chapters 4 and 5 have been read.

The biggest market for short-term funds outside London is, however, that of New York, and the complexion of its business is so different from that of London that it merits some particular attention.

To New York flow surplus funds from banks all over the country—through the correspondent bank system of country banks depositing funds with town banks, and through the country banks using the great New York banks as their agents for securing short-term outlets in New York. There are in New York four short-term assets which can be acquired by a bank with surplus cash: (1) Loans to the Stock Exchange; (2) Commercial paper; (3) Treasury Certificates; and (4) Bills of Exchange.

The Treasury Certificate corresponds to the English Treasury Bill, and the amount and currency (term) of Treasury Certificates depend entirely, of course, on the Federal Treasury's operations. Loans to the Stock Exchange and Bills of Exchange have also their counterparts in London. *Commercial Paper*, on the other hand, is quite peculiar to the United States. If an American business concern wants to borrow temporarily it can, if its standing is fairly good, place 'commercial paper' in New York. This commercial paper constitutes a claim, to such and such an amount, on the general assets of the firm. Whereas a bill of exchange is generally the outcome of a particular transaction in, say, primary commodities, the value of which covers the amount of the bill more or less precisely, the commercial paper is secured by a lien on the general assets of the company, just as debenture stock is. The nearest equivalent in England is in fact the short-term notes that are occasionally issued by very large companies wanting more capital but unwilling to pay the interest demanded at the moment on long-term debentures. But the commercial paper in New York has a market in only a very limited sense—it can be placed with any bank which is satisfied with the security, but once placed it does not come into the market again.

Commercial paper is, by convention, held until maturity by the original purchasing bank. Its rediscountability at the Federal Reserve Bank depends upon certain conditions as to maturity, &c. It is thus sometimes more liquid than the ordinary English bank advance, which depends upon a banker-and-customer relationship between lender and borrower. Commercial paper may be placed by a well-known American corporation with a bank of which it has never heard. The English bank advance is, of course, much more elastic.

By far the most important opening for short-term funds in New York is in loans to the stock market. In England similar loans have been growing for some years now; but their importance in New York makes the English stock-market loans appear quite trivial. The main reason for the difference lies in the Wall Street system of settling all transactions every day, whereas in London only transactions in the unspeculative gilt-edged market are settled daily, the rest of the markets having fortnightly (exceptionally three-weekly) settlements. Speculators who have bought in the hope of rising prices (bulls) have therefore to borrow money continuously in New York, whereas in London only the fortnightly settlement days have to be overcome. Bull speculation in Wall Street is accordingly largely dependent on loans to stockbrokers from the New York banks, acting either on their own account or as agents for out-of-town banks. The loans are either at call or short notice. A single bank can easily turn a loan to the stock market into cash by calling it in; but a general calling-in of stock-market loans is bound to produce a crisis in Wall Street, for the Federal Reserve System (the central bank) will not take over stock-market loans.[1]

The ease with which call loans can ordinarily be obtained in Wall Street has been often pointed out as a stimulus to unhealthy speculation in the stock market. When the Federal Reserve System was established in 1913

[1] There have been indications of some modification of this position.

this argument was used to support the establishment of a market in bills of exchange. Since 1914 American banks have been able and willing to do acceptance business. There exist no specialist acceptance houses like those in London, the accepting being done entirely by the commercial banks. 'Bank acceptances', as the bills of exchange are called, enjoy quite a good market, which has been encouraged by the fact that they are rediscountable at the Federal Reserve Banks. The volume of them in the market is far below the amount of stock-market loans, but is comparable with the volume of commercial bills in the London discount market. The bills in New York are predominantly foreign-trade bills, as in London, the trades in raw cotton, coffee, and sugar being particularly important in supplying bills.

There are no discount houses of the London kind, though there are a few firms whose work is mainly of a true brokerage (or 'go-between') character. Consequently the market for call money is restricted to the Stock Exchange. The contact between the central bank and the commercial banks must accordingly be direct. If the commercial banks want more cash they must themselves go to the central bank—either to rediscount bank acceptances or to borrow. In London, when the commercial banks want cash they call in loans from the discount market and the discount houses have to go to the central bank.

During the years between the wars the London and New York money markets were in many ways growing more and more like each other. In London, where previously the commercial bill of exchange was the staple paper of the market, the short loan to the Stock Exchange was becoming more common. In New York, where previously the loan to the Stock Exchange was all-important, the bill of exchange began to fill an appreciable part of the market, and 'commercial paper' declined. Since then, the development of the short-bond business has given

the London market a new character to which there is no parallel in New York.

Just as the bill market in New York was established with the primary intention of aiding the working of the new central banking system, so the proposals for central banks in other countries—particularly the British Dominions—have frequently been associated with suggestions for the development of bill markets in their centres. As we shall see in later chapters, central banking technique of the traditional kind does, to a great extent, depend upon the existence of a good money market. It is, indeed, sometimes argued that a central bank is useless where there is no short-term money market. But such markets remain extremely rare. In Canada almost the only outlet for short money is in loans to the Stock Exchange. In Australia there have been limited attempts to develop a market in Treasury Bills, but without real success. In South Africa attempts to popularize the bill of exchange have failed. In India the existence of a predominantly unit banking system leaves more scope for the inland bill of exchange, and there are quite good markets in the main centres (Bombay being the most important); but much more will have to be done before the markets are perfect. And it must be remembered that any development of bill markets in other countries is bound sooner or later to mean some further loss of attractive business for the London market—as has happened with the rise of the New York market. There is in the world only a limited amount of business that can be conveniently financed by the drawing of bills of exchange, and this amount is, for many reasons, tending to shrink. It would be idle, therefore, to expect a world-wide development of discount markets on the London plan (which itself was based largely on conditions that have passed away) or to try to transplant a central banking technique that has been shaped by the peculiarities of a bygone London.

4

CENTRAL BANKING—CONSTITUTIONAL QUESTIONS

1. *General Considerations*

THE business of a central bank, as distinguished from a commercial bank, is to control the commercial banks in such a way as to promote the general monetary policy of the State. There are three fundamental points implicit in this: first, a central bank does not, as a commercial bank does, exist to make the maximum profits for its owners; second, it must have some means of controlling the commercial banks; and third, it is subordinate to the State. The technique of controlling the commercial banks will be examined in the next chapter. In this chapter we shall confine ourselves to the constitutional questions of the nature of a central bank's subordination to the State and the related question of the disposal of any profits and meeting of any losses which it may incur in the course of its business.

The subordination of a central bank to the State is based not only on the general subjection of its Directors as citizens to whatever laws the State chooses to impose. It is based also on the tradition firmly rooted in all countries, democratic and despotic alike, that the State must impose some laws regulating the means by which its citizens shall discharge their debts. When the State merely decrees that debts are finally dischargeable only in monetary units called pounds sterling and that a pound sterling is a certain weight of silver (or gold) it is imposing a fundamental monetary law to which any banking business must conform. The State's regulation of monetary affairs may be as elementary as this, or it may go into much more detail. A common position in the last hundred years has been for

the State to say that certain forms of money are legal tender and that such money is convertible into gold, and gold into money, at a fixed rate. In this case it is the duty of the central bank to regulate the banking system in such a way that legal tender money *is* always convertible into gold, and gold into money, at the legal rate; and to perform that duty in the way most conducive to the general welfare of the community. Or the State may say that the central bank must subordinate all other aims to providing the Government with such supplies of money as are needed to finance Government activities: then the central bank has no choice—it must finance the Government in the best way it knows.

It has sometimes[1] been fashionable to argue that central banks must be 'independent'. But it cannot be too strongly emphasized that this use of the word 'independent' may mislead people about the position of a central bank. The authority of the State over the central bank is always necessarily absolute. All that is open to question is the extent to which the sovereign body should detail its commands to the central bank—for the monetary laws are such commands. The extent of governmental regulation of the central bank does in fact vary very much. Sometimes the sovereign body of the State contents itself with prescribing equality between the monetary unit and a certain weight of gold and leaves all the rest to the central bank—perhaps even being prepared to 'rubber-stamp' modifications of the primary monetary law at the instance of the central bank. Such was more or less the position in pre-1914 Britain, and it might even be described as the traditional view of the proper relations between the central bank and the State. The opposite extreme occurs when the central bank is reduced to a mere engine for facilitating the financing of State services. Then the central bank 'rubber-stamps' the everyday decisions of the Government. This rarely occurs except when the financial position

[1] Especially in the nineteen-twenties.

of the State is desperate. Examples are provided by several Central European countries in the early twenties, and it was as a reaction against the behaviour of their central banks at that time that the 'independence' of central banks became a canon of orthodoxy. All new central bank charters for about ten years after 1922 reflected this reaction; but more recently there has been spreading a realization that the State has, and must be prepared to assert, ultimate control of the actions of its central bank.[1] How far this tendency could go without the central banks becoming the mere tools of improvident public finance is a matter of opinion.

The question of ownership of a central bank is naturally associated with that of control. State control points to State ownership of one kind or another. Where, in chartering the central bank, the legislature has designed to maximize the independence of the central bank, ownership by the general public or by the commercial banks has generally been prescribed. Where, on the other hand, the legislature has decided that the central bank's subordination to the State is to be emphasized, ownership by the State is more common. But in no case is private ownership so absolute as to leave unlimited disposal of the profits—there are always provisions for the State sharing in the profits, and it has likewise been recognized in practice that the State should bear part of any uncovered losses. Central bank constitutions vary very much in these important matters of ownership and direction—it is impossible to describe a single type as a standard. We shall therefore discuss some

[1] Montagu Norman, then Governor of the Bank of England, defined the relation of the central bank to the Government in these terms in 1926: 'I think it is of the utmost importance that the policy of the Bank and the policy of the Government should at all times be in harmony—in as complete harmony as possible. I look upon the Bank as having the unique right to offer advice and to press such advice even to the point of "nagging"; but always of course subject to the supreme authority of the Government.' (Answer to Qu. 14,597, Minutes of Evidence, Royal Commission on Indian Currency and Finance, 1926.)

of the more significant cases country by country.[1] Variations from one case to another are by no means to be interpreted as necessarily reflecting national differences of view about central banking: they reflect rather the prevailing world fashions about central banking at the various times at which the particular central banks happen to have been chartered or re-chartered. Of course, if at any time a central bank's constitution is quite out of keeping with the fashionable view, the bank may be re-chartered—as happened in the nineteen-thirties in the United States and many other countries. Or the power of the State to re-charter may lead to the written constitution being superseded by unwritten conventions more in keeping with prevailing ideas, as happened in England during the decades preceding the nationalization of the Bank of England in 1946.

11. *The Bank of England*

The central bank in this country is the Bank of England.[2] The Bank of England was originally a joint-stock company, established in 1694 by Act of Parliament, and the entire capital stock was acquired by the State under the Bank of England Act of 1946. Its affairs are regulated by a Governor, a Deputy-Governor, and sixteen Directors appointed by the Crown. The Governor and Deputy-Governor hold office for five years. The Directors hold office for four years, four of them retiring each year; not more than four of them may be full-time officers. All of these officers are eligible for reappointment and there is

[1] This discussion of the constitutions of particular central banks is not intended to be exhaustive. For further detail the reader should refer to Kisch and Elkin, *Central Banks*.

[2] The Bank of England is the central bank not only of England but of the entire United Kingdom of Great Britain and Northern Ireland. Its control is most direct over the English banks, and the predominance of the English banks in the whole and the indirect control over the Scottish and Ulster banks make it reasonable to think simply of the Bank of England as the central bank of England. It should be emphasized that this *is* a simplification.

no provision for compulsory retirement, but it has been stated that normally no person over 66 years old will be appointed. The Act of 1946 stipulates that members of the House of Commons, Ministers of the Crown, civil servants, and aliens may not be appointed to any of these offices; apart from these restrictions the Crown (acting of course on ministerial advice) is left entirely free to select people from any walk of life.

The effective managing body of the Bank now consists of the Governor, the Deputy Governor, and the four full-time executive Directors. The present holders of these offices may all be described as professional central bankers, in the sense that they have spent a considerable part, if not the whole, of their careers in the service of the Bank. This need not invariably be the case, and indeed the previous Governor could certainly not be so described; but in present circumstances it is necessary for most of these six full-time people to have that familiarity with the Bank's business which can come only from long years of service in the Bank. In the appointments of the twelve part-time Directors[1] the Crown has fairly closely followed the selections of the inter-war period, when the old (private) Court included not only City merchants and merchant bankers but also distinguished men from industrial and commercial fields. The appointment in 1949 of the vice-chairman of one of the ordinary commercial banks broke a very long tradition that the ordinary banks should be unrepresented in the Bank's Court of Directors.

Under the Act of 1946 responsibility for the conduct of the Bank is placed upon the Court as a whole, and though day-to-day activity is naturally concentrated in the hands of the Governor and his full-time colleagues, the Governor must see that he carries the Court with him (after the event if need be) in all his major decisions. For more constant advice the Governor has at hand the 'Committee of

[1] There may be more than twelve—if the full-time Directors are correspondingly less than four.

Treasury'. This Committee consists of the Governor and his Deputy and five Directors who are chosen by all the Directors in a secret ballot. It follows a long tradition in being the senior Committee of the Bank,[1] but the executive authority it used to have has passed largely to the group of full-time members of the Court. The constitution of the Bank, based on the Act of 1946, thus provides for the management of the Bank effectively by the Governor and a small group of professional central bankers, reinforced by the counsel of men who have earned wide respect in varied spheres of economic activity.

The Bank remains a corporate body whose powers are regulated by its charters, just as an ordinary joint-stock company's powers are regulated by its Articles of Association. The powers under the charters are very wide, and the operative restrictions on its activities were, until the recent Act, mainly self-imposed conventions that had grown as the Bank had developed its work as the central bank. The Government of the day for a very long time had always had some influence, and this influence grew significantly after 1914 and especially after about 1931. Treasury and Bank were already well used to working hand-in-glove before 1946, but only by Clause 4 of the 1946 Act has the relationship acquired specific statutory authority. The first two sub-clauses of Clause 4 are as follows:

'(1) The Treasury may from time to time give such directions to the Bank as, after consultation with the Governor of the Bank, they think necessary in the public interest.

(2) Subject to any such directions, the affairs of the Bank shall

[1] It goes back to the very early days of the Bank, and was originally 'the Committee to wait upon the Lord Treasurer'—in the days before the Treasury went into Commission—and, because in the early days business with and for its largest customer (the Government) absorbed the main energies of the Bank, the Committee soon attracted to itself all the Bank's major problems, irrespective of their relation to government business. Over a long period membership consisted of the Governor and Deputy and those Directors who were ex-Governors.

be managed by the court of directors in accordance with such provisions (if any) in that behalf as may be contained in any charter of the Bank for the time being in force and any bye-laws made thereunder.'

It should be noted that the Governor has a statutory right to be consulted before a direction is issued, but he is not given power to veto it.[1] The Treasury retains the ultimate responsibility, but the provision about consultation ensures that it will not discharge that responsibility without having taken advice from the quarter technically most competent.

There are in the Act certain provisions about payments by the Bank to the Treasury, related to the annual dividend charge on the Government stock issued as compensation to the former private stockholders, but there is elasticity in the clause and it will be possible for the Bank to ignore the profit aspect of its operations. Profits are of course a by-product of central banking, not (as in commercial banking) the ultimate object of operations.

The most important innovation of the Act of 1946 lies in the remainder of Clause 4, whereby the Bank of England is endowed with statutory powers to direct the affairs of the commercial banks. Hitherto the Bank of England had had to rely on the art of persuasion and, in war-time, on the bankers' knowledge that the Treasury could, if necessary in support of the Bank of England, issue Regulations under special war-time powers. Sub-clause (3) reads:

'The Bank, if they think it necessary in the public interest, may request information from and make recommendations to bankers, and may, if so authorized by the Treasury, issue directions to any banker for the purpose of securing that effect is given to any such request or recommendation:

Provided that:

(*a*) no such request or recommendations shall be made with respect to the affairs of any particular customer of a banker, and

(*b*) before authorizing the issue of any such directions the

[1] In short, the 'Old Lady of Threadneedle Street' retains her 'right to nag' (cf. p. 73, n.).

Treasury shall give the banker concerned, or such person as appears to them to represent him, an opportunity of making representations with respect thereto.'

There are thus two limitations upon the Bank of England's power. First, the compulsion must have the support of the Treasury (to which the banker under compulsion has right of direct access) which is, through the Chancellor of the Exchequer, answerable to Parliament. Secondly, directions must relate to the whole business or to a whole class of business of a commercial bank, and not to its business with a particular customer. The latter restriction was imposed in protection of the traditional privacy of the banker-customer relationship and, since the central bank's objects refer to whole classes of business, is not detrimental to central bank control of the monetary situation. The former restriction serves to emphasize the dependence of central banking upon Government control and (like subclause (1)) ensures that the Treasury shall exercise compulsion only in full cognizance of the views of the compelled party.

What is most noteworthy is not, however, the limits set to the Bank's powers over the other banks, but the breadth of these powers. Central bank legislation in other countries has generally set out in considerable detail the powers of the central bank and has supported them by specific statutory restrictions on the other banks—notably by compelling the latter to maintain 'fixed ratio' reserves at the central bank. Outside these specific statutory powers the central bankers have had to rely (as did the Bank of England before 1946) upon persuasion and co-operation, coupled sometimes with the knowledge that legislators would in the last resort intervene to support compulsion of recalcitrant bankers. The Bank of England is now operating under no such restrictions—it can issue directions compelling bankers, for example, to hold certain reserves with itself, to vary those reserves, to alter their charges for any class of business. It may compel the bankers to favour one industry or

group of industries as borrowers.[1] In the exercise of all these powers the initiative rests solely with the Bank of England, but the Bank cannot exercise compulsion except with Treasury support. Given Treasury support, the Bank's powers are unparalleled elsewhere. Their only limitation of general importance is in fact that imposed by the responsibility of the Chancellor of the Exchequer to Parliament, not only for the exercise of compulsory powers but also for advice tendered to the Crown on the appointment of the Governor, Deputy-Governor, and Directors.

Though its formal powers are thus very considerable, the position in fact remains that the Bank exercises its influence mainly by informal communication and persuasion behind the scenes. There are now recognized channels of communication between the Bank and the various sections of the market. The Clearing Banks (those London banks whose business is predominantly English—the 'Big Five' and a handful of others), for example, have two Committees—one of their Chairmen, and one of their General Managers, and the Governor of the Bank will ordinarily communicate with the banks through the Chairman of the Chairmen's Committee or the Chairman of the General Managers' Committee, according to the subject of his communication. There are similarly the Accepting Houses Committee and the Discount Market Association, and through these organizations and numerous personal contacts the Bank of England keeps its finger on the City's pulse and can secure compliance with its wishes without

[1] In the debates in the House of Commons, preceding the enactment of the nationalizing Bill, the Chancellor of the Exchequer, referring to the exercise of these wide powers, said '. . . it may be desirable, in certain circumstances, to urge the banks to devote their resources to one or other form of investment which it was felt by the Government and by the Bank of England was necessary in the interests of a planned priority, with a view to securing full employment in the country and building up our export trade and other necessary elements in our economy'. (See *Economist*, 16 February, 1946, p. 260, where there is a useful commentary on this statement and on the powers conferred under Clause 4 of the Act.)

any resort to legal action. The Treasury has no direct contact with any part of the market, but communicates solely through the Governor of the Bank.

One notable peculiarity of the Bank's present constitutional position is the absence of an informative Annual Report. As one of the 'nationalized industries' it does publish an Annual Report, but it is a bare and boring document, doing scarcely more than reproducing figures already available elsewhere. In this respect it is not only unique among the nationalized industries (some of which have not only published very thorough Annual Reports but have also had to submit to full-dress Parliamentary debate upon them) but it is also distinguished from most of the other central banks in the world. Those of the U.S.A., Canada, and Australia in particular publish annual reports that are extraordinarily informative and important in educating public opinion in the requirements of economic policy. To the outsider it does seem a great pity that the Bank of England, with its unrivalled knowledge, should not publish an annual commentary upon events and explanation of its policy and views. Perhaps the reason for the non-appearance of such a document is London's extraordinary position as a great international financial centre—still the banker to a wide Sterling Area—in a vulnerable condition owing to the chronic weakness of the British balance of international payments. An official commentary from the Bank of England would excite world-wide attention and could not fail at times to have embarrassing effects on London's reserves; and it is perhaps best that the Bank should await better days before beginning to issue a Report that could be of high importance in moulding a sane and well-informed public opinion on monetary problems.

III. *The American and other central banks*

The central bank of the United States of America is a system of twelve connected banks called the Federal Reserve Banks. The system was founded in 1913, but the

period intervening between 1913 and the present has seen such changes in ideas about central banking that the amended constitution of the system is already a mixture of anomalies based on historical forces. For a full understanding of the constitution of the system readers should look into some of the historical works:[1] here we are concerned simply to outline the system in the light of our general discussion.

The Federal Reserve System consists of twelve Federal Reserve Banks, each having one geographical section of the country as its sphere of operations. The capital of the Reserve Banks was subscribed by the 'member banks' in its region. Member banks are all those commercial banks which are obliged by law, or are induced, to attach themselves to the system, and such are the laws and the inducements that nearly all large banks and many of the small ones are member banks.[2] The member banks have a shadow of control over the functioning of the System in that they elect some of the Directors on the local Boards—the Boards of the individual Reserve Banks. But all fundamental central banking operations are under the control of a central body, the Board of Governors of the Federal Reserve System, and it is to the constitution of this body only that we need attend. The Board of Governors consists of seven members appointed by the President, subject to the approval of the Senate, for terms of fourteen years. Among these seven are the Chairman and Vice-Chairman, selected by the President with the approval of the Senate and serving four-year terms. This governing body has effective control not only directly over all the most important business of the entire system but also over the appointment of the officers of the individual Reserve Banks. The American central bank is thus directed by men appointed

[1] My little book, *American Banking System* (Oxford, 1948) includes 'A Note on Further Reading' (pp. 127–8).

[2] Member banks hold about 86 per cent. of the total deposits of all commercial banks.

for fairly long terms, and appointed by the Government of the country.

It is prescribed by law that the Federal Reserve Banks shall withhold a certain part of their profits as reserve capital. Stockholders may be paid a cumulative dividend of 6 per cent. per annum. Out of any remaining profits certain relatively small payments are made to the Federal Treasury and the rest is retained as surplus by the Reserve Banks. The possibility of great changes in profits occurring as a result of the price of gold being changed has been obviated by the Treasury's taking over the entire gold reserve.

The Bank of France was until 1945, like the Bank of England, an ordinary shareholders' bank; but the Governor and his Deputies were appointed in effect by the Government of the day and held office during the pleasure of that Government. The shareholders had the right to elect Directors (regents) and other important officers, and it was through these elections that the celebrated 'two hundred families' maintained such great influence in the counsels of the bank. But already before 1939 circumstances tended to increase the control exercised by the Government and it had become customary for the Governor to be changed on every important change of Government. In the Fourth Republic the State has assumed complete formal control.

In the general run of central banks established between the wars ordinary shareholders' ownership has been common, though there are cases of the commercial banks' having been called upon to provide the capital. In either case dividends are limited by law, surplus profits going to the Government.

Where special profits or losses have been incurred by the operations of the central bank there is sometimes *ad hoc* legislation providing for the special profit or loss to benefit or be borne by the Government. Examples of this have been the legislation which provided for the Government

bearing the loss suffered by the Reserve Bank of South Africa in 1931, when part of its reserve lost value on the London pound's departure from gold; and the numerous cases of Governments taking the profit when gold reserves were 'written up' during the nineteen-thirties.

Two interesting exceptions to the general rule of ordinary shareholders' or commercial banks' ownership are the Bank of Canada and the Reserve Bank of New Zealand. Both of these were originally established with share capital provided by general public subscription. But more radical Governments coming into power wished to increase political control over the central banks, and in New Zealand the entire share capital was compulsorily sold by the public to the Government. In Canada the Bank of Canada was obliged to issue new capital just exceeding the old capital to the Government, so that the Government holds a majority interest.

Systems for appointing Directors vary widely. Sometimes the shareholders have most of the control, in which case the system tends to develop into one of the old Board co-opting new members, as in the pre-1946 Bank of England. Sometimes the Government has more or less power over the appointment of Directors. Five- and seven-year terms of office are common. Frequently the charter of the central bank prescribes that the Directors shall be chosen from certain classes of people. A common provision, for example, is that so many Directors shall be representative of commercial interests, so many of agricultural interests, so many of manufacturing interests, and so forth. The Federal Reserve system used to have its Directors chosen largely on these lines—and vestiges of it remain in the local boards. Sometimes the Directors must be selected as representative of particular geographical sections of the country. Provisions of this kind are intended, of course, to ensure that the central bank shall have due regard, in determining its policy, to all important interests of the country. It is sometimes argued that the system of 'repre-

sentatives' of different interests must tend to exaggerate disunity within the Board, as a compromise of views is less easy when men feel that they are there to watch the interests of different bodies of people. It is significant that changes in American law have whittled down the representation of particular interests in the government of the Federal Reserve System. One of the advantages of the more informal method of choice is that Directors may in practice be chosen from various fields without being obliged to feel that they are on the Board to represent the particular interests of the industries from which they come. All sides of a case are just as likely to be put forward; but there is more chance of compromise where the 'representation' is less formal. Occasionally it is provided that the Secretary of the Treasury shall be an *ex officio* Director, though not always with a vote.

The Governor and his Deputy are more often than not appointed by the Government for terms of seven years or so. Alternatively the election of the Governor is subject to Government approval, the system in the Reserve Bank of India being a complicated one of this kind. The distribution of power between the Governor and subordinate executive officers on the one hand and the Board of Directors on the other varies; but in general most of the power is in the hands of the Governor. This sometimes perhaps results from the Directors representing conflicting interests and so not forming an harmonious body. Often it is the effect of the enormous area from which the Directors are drawn. In India an attempt has been made to deal with this problem by establishing Local Boards of Directors (at Delhi, Calcutta, Bombay, and Madras), but the consequent lack of cohesion in the Directing body is bound to leave most of the effective power in the hands of the Governor and other senior full-time executives. This is more likely in those cases where the Governor is, but Directors are not, appointed by the Government. Australia presents an extreme case, with no Board of Directors, but a Government-

appointed Governor who is aided only by an Advisory Council consisting of Government officials and officers of the Commonwealth Bank itself.[1] In general it may be said that the tendency in most countries (including Britain) is to increase the power of the Governor and his full-time assistants at the expense of Directors who are tending to become mere consultants.

[1] Legislation to bring the Australian arrangements more into line with those elsewhere is at present (1950) under consideration.

5

THE BUSINESS OF CENTRAL BANKS[1]

1. *The Nature of Central Banking*

THE fundamental business of a central bank is to control the commercial banks in such a way as to support the monetary policy directed by the State. The basis of its control is its relationship with the commercial banks—the central bank is the 'banker's bank'. This means that the commercial banks 'bank' with the central bank; they look to it as a safe deposit of their basic cash reserves, which they can exchange for legal tender money on demand; and they also look to the central bank either directly or indirectly for the relief of temporary but critical shortages of cash reserves. The central bank thus undertakes for the other banks the more fundamental services which these banks in turn provide for their depositing customers, and it is the ultimate source of cash. Incidentally to these functions, it is usually the sole, or at least the largest, issuer of bank notes. There are certain advantages in its acting as banker to the Government, and it usually does so. Also it sometimes conducts a small amount of ordinary banking business for private customers. Neither of these two functions is essential to its basic work as a central bank, nor indeed do they flow naturally from it. On the other hand, the work now commonly undertaken by central banks in the foreign-exchange business, while not being indissolubly related to its main functions, does flow naturally from its close relations with the commercial banks and other financial institutions. This foreign-exchange work—buying and selling foreign currencies, and operating the Foreign Exchange Control—is usually

[1] The most important discussions of central banking are to be found in Keynes, *Treatise on Money*, vol. ii (esp. chaps. xxv, xxxii, and xxxiii), and Hawtrey, *The Art of Central Banking* (esp. the title essay).

conducted by the central bank not on its own account but as agent for the Treasury or other responsible Government department. The bearing of these foreign exchange operations on the internal banking situation receives some attention in the next chapter, and the present chapter will be restricted to the strictly central banking functions. The next five sections of this chapter will discuss the central banking work of the Bank of England. We shall then consider briefly how this work is performed in the United States. In the concluding section we shall consider questions arising from the work a central bank sometimes undertakes as banker to the government and to other non-bank customers. Some questions of central banking special to countries with undeveloped financial institutions are deferred to Chapter 12.

11. *The Bank of England's Weekly Bank Return*

A veil of secrecy surrounds many of the Bank of England's most interesting operations, but it is forced to some small degree of publicity by Acts of 1844, 1928, and 1939. Under these Acts the Bank issues a weekly balance sheet, called the Bank Return. Here is a recent example:

BANK OF ENGLAND

Return for Wednesday, December 7, 1949

Issue Department

	£		£
Notes issued:		Government Debt	11,015,100
In Circulation	1,283,685,186	Other Government Securities .	1,288,366,146
In Banking Department	16,671,637	Other Securities .	607,808
		Coin	10,946
		Amount of Fiduciary Issue .	1,300,000,000
		Gold Coin and Bullion (at 248*s.* 0*d.* per fine oz.) .	356,823
	£1,300,356,823		£1,300,356,823

Banking Department[1]

		£			£
Capital		14,553,000	Government Securities		467,068,941
Rest		3,457,545	Other Securities:		
Public Deposits:			Discounts and Advances	15,166,200	
Public Accounts	9,139,954		Securities	23,875,186	
H.M. Treasury Special Account	80,956,894				39,041,386
		90,096,848	Notes		16,671,637
Other Deposits:			Coin		5,236,574
Bankers	308,930,962				
Other Accounts	110,980,183				
		419,911,145			
		£528,018,538			£528,018,538

The *Note Issue* is regulated by the Currency and Bank Notes Act of 1939. To the principles that should govern the note issue we shall return later: here we are concerned only with the legal provisions and the accountancy arrangements of the Bank. Under the Act of 1939 the Bank is allowed to issue a certain amount of notes against securities held, and an indefinite amount against gold. The issue against securities is called the *Fiduciary Issue*. Its amount was in the Act fixed at £300 millions, subject to the Treasury being allowed, on application from the Bank, to raise or lower it. If the amount has been so raised above £300 millions for two years the increase becomes subject to review by Parliament. At present the Fiduciary Issue stands at £1,300 millions. The issue against gold is limited by the amount of gold held in the Bank's vaults, the gold being valued for this purpose at market price.[2] Since 1939

[1] The division of the Bank into *Issue Department* and *Banking Department*, now a purely accounting division having no bearing on policy, derives from the historically important Bank Charter Act of 1844, when it was intended as a device for making the business of note issue automatic and segregating it completely from all 'banking' business.

[2] Under present (1950) conditions the phrase 'market price' is slightly misleading, since there is no free market. The figure used is realistic,

the country's gold reserves have been held entirely by the Exchange Equalization Account (part of the Treasury) and the provision for issue of notes against gold has become practically inoperative. Only a trifling sum of gold remains in the Bank, so that the authorized note issue is virtually fixed by the Parliamentary resolutions fixing the Fiduciary Issue, at present (1950) £1,300,000,000. Notes to the total authorized issue are actually printed. £1,283 millions are in circulation (which includes those in the tills of the joint-stock banks) and £17 millions are lying idle in the Bank of England (in the 'Banking Department'). The notes in the Banking Department thus represent the unused portion of the Bank's maximum legal issue: the £17 millions indicates the amount by which the circulation could be increased without the law being broken or the Fiduciary Issue altered.

On the assets side of the Issue Department the item *Gold Coin and Bullion* is already explained. The other items are the securities held against the Fiduciary Issue. The first item, *Government Debt*, is a book entry that the Government has borrowed so much directly from the Bank. It dates from the earliest days of the Bank, when the latter was allowed to issue notes to a certain amount if it lent that amount to the Government. *Other Government Securities* are simply Government debts recorded in the form of bonds, &c.: while *Other Securities* are similar bonds but of the Dominion governments and other borrowers of very high credit standing.

In the *Banking Department*, *Capital* is the amount of capital subscribed by the stockholders of the Bank from time to time (and now held by the Treasury). The *Rest* is undistributed profit—reserve capital we can call it. These two items have no monetary significance and are simply vestiges from the days of private ownership. The item *Public Deposits* is divided into *Public Accounts* and *H.M.*

however, in that at 248*s*. per fine oz. it corresponds to the United States dollar-sterling exchange rate and the United States price of gold.

Treasury Special Account. The latter is a new and (it is to be expected) only temporary item, arising from the peculiar mechanism by which the U.S.A. Government makes financial aid ('Marshall Aid') available to Britain. It is explained at a later stage in this book[1] and for the present may be regarded as a purely accounting counterpart to some of the *Government Securities* appearing on the other side of the balance-sheet. The other subdivision—*Public Accounts*—shows the balance of the main normal British Government accounts—including the Exchequer, Savings Bank, Commissioners of National Debt, and Dividend Accounts, &c. An increase in this item means that the Government is, on current and capital transactions together, having more money paid to it than it is paying to members of the public, and vice versa.[2] In *Other Deposits* there is included the very important sub-item *Bankers' Deposits.* This sub-item shows the balances at the Bank of England of the ordinary commercial banks. These balances are neither more nor less than book entries at the Bank of England showing that the various banks have the right to draw cheques on the Bank of England to those amounts. We have seen, in discussing commercial banking, how these balances at the Bank of England are regarded as cash reserves by the commercial banks. In so far as these latter regulate their lending policies by reference to the size of their cash reserves, the size of the sub-item Bankers' Deposits in the Bank Return is an index of the potential total supply of money. The sub-item *Other Accounts* shows the balances of the Bank of England's ordinary banking customers. Among these are other governments and foreign and Commonwealth banks (among them several central banks). There are also the balances of a few great companies and long-established merchant houses for whom the Bank

[1] See p. 176.

[2] I have for the sake of simplicity excluded the other possibilities: that it had borrowed from the Bank, or had transferred money from accounts in other banks.

of England was acting as ordinary banker long before it was suggested that such business was not the proper field of the Bank of England. Just as some people bank with Barclays, or the Midland, so these people bank with the Bank of England. We shall return later to the question of the advisability of the central bank having an ordinary banking business in addition to its central banking functions. For the moment we may remember that this sub-item is not an item of central banking business and is not of any monetary significance.[1] The Bank does not accept any new private customers, and the balances of its established customers are very small relatively to the total volume of bank deposits in the country. When we are calculating the total supply of bank deposits in the country we should, strictly speaking, add to the deposit liabilities of the commercial banks the sub-items Public Accounts and part of Other Deposits (Other Accounts) in the Bank of England Return. Bankers' Deposits at the Bank of England, on the other hand, form no part of the supply of bank money which anybody can transfer for the settlement of his debts.[2] Public Accounts and Other Accounts show the Bank of England as an ordinary bank; Bankers' Deposits shows it functioning as the *bankers' bank*.

Turning now to the assets side of the Banking Department's accounts, we find an item *Government Securities*. This shows the Bank's holding, in its Banking Department, of British Government bonds and its 'Ways and Means Advances' to the Government. In part (as to £80,956,894

[1] Variations in central and other 'outside' bank accounts included here are usually small, as these banks use most of their London funds for holding Treasury Bills or as Money at Call in the discount market and their balances at the Bank of England are relatively small working balances (see also Chapter 6).

[2] They can be drawn upon for the settlement of inter-bank debts; but this causes no change in the total supply of money—cash is merely transferred from one bank to another. That part of 'Other Accounts' which is due to the 'outside banks' (see Chapter 6) is in this sense akin to Bankers' Deposits, but (unlike the latter) it provides no part of the cash basis of English monetary supplies.

in the example shown) these securities are special Non-Interest-Bearing Notes and are merely an offset to the sub-item 'H.M. Treasury Special Account'. The remainder, the normal part of the item, consists of Treasury Bills, other government securities such as would appear as 'Investments' in the balance-sheets of the commercial banks, and Ways and Means Advances. It can be changed at any time on the initiative of the Bank, which can buy Treasury Bills from the Treasury or the discount market[1] or buy or sell long-term securities through the Stock Exchange. The Bank can also deal with the British Government directly, as when it makes 'Ways and Means Advances', of the ordinary banking loan type, to the Government.

The item *Other Securities* is subdivided into *Discounts and Advances* and *Securities*. Under Discounts and Advances there are three items, the individual magnitudes of which we do not know—one or another of them may sometimes stand at zero. First there are two items arising out of the Bank's ordinary banking business. These two items are bills of exchange discounted outright for the Bank's own customers, and advances made either by overdraft or loan to the Bank's own customers. The third item shows similar transactions with the discount houses arising not out of the Bank's ordinary banking business with ordinary customers but out of its traditional operation as lender of last resort.[2] This distinction between the Bank's ordinary customers and the members of the discount market should not be understood to imply that the members of the discount market are not in any sense 'customers' of the Bank of England. The discount houses do in fact normally keep accounts open at the Bank of England, but the Bank's relations with them are of a significance entirely different from that of its relations with those non-financial houses and individuals who bank with the Bank of England as though it were an ordinary bank.

[1] Through the open back door (at market rate).

[2] At the official Bank Rate.

The second part of the general item Other Securities is called *Securities*. It consists of non-British Government bills, bonds, &c., which the Bank of England has acquired on its own initiative. Among these securities are parcels of bills bought by the Bank from discount houses, who are expected to put into such parcels a representative selection of the non-Treasury bills handled by them.[1] There are also shares and debenture stock which the Bank has obtained when helping directly or indirectly in the finance of industrial development or reconstruction.[2] Any bonds of other governments (e.g. the Indian Government) not held in the Issue Department would appear under this sub-heading. If the Bank of England at any time took up debentures of any of its private customers—some of which are great joint-stock companies—the debentures would be entered under this sub-heading Securities.

The next item on the assets side is *Notes*. These have already appeared on the liabilities side in the Issue Department and are thus merely a cross-entry that would be omitted on both sides if the accounts of the two departments were amalgamated.[3] The item shows the unused power of note-issue of the Bank, given the size of the gold stock and of the Fiduciary Issue. The last item, a very small one, is *Coin*, and nowadays consists only of silver coin held ready for issue to the commercial banks as they require it for meeting public demands for small change.

The magnitude of many of these items is superficially the result, not of any of the Bank's actions, but of its acting as required by its customers—the commercial banks, the British Government, and others. But some of the items—

[1] This arrangement, of long standing, enables the Bank of England to keep some check on the *quality* of the commercial transactions covered by bill market finance.

[2] This was an important and novel activity of the Bank in the inter-war years, under Montagu Norman.

[3] For an example of such amalgamation of accounts see *Report of the Committee on Finance and Industry* (Cmd. 3897 of 1931), p. 145. Amalgamation was recommended (in vain) by this Committee.

Government Securities most plainly—cannot be explained even superficially in this way. The Bank clearly is not passive. And, even when the initiation of a transaction comes not from the Bank but from some outside source, the Bank can affect the course of its business by manipulating the terms on which it will do the business. The Bank is certainly not a purely passive institution opening its doors and waiting to be told what to do by its three classes of customers. To the ways in which it takes the initiative and the technical results of its actions we must now turn.

III. *The Bank of England as the Source of Cash*

It has been said above that the business of the Bank of England is to control the commercial banks. Its control of the commercial banks is based on two facts—(i) the regard paid by the commercial banks, in the regulation of their most important operations, to the size of their cash reserves, and (ii) the position of the Bank of England as the source of cash. The former has already been explained in Chapter 2. Before we can finally consider how the Bank of England regulates the supply of cash, we must explain how the Bank of England is the source of cash. In this there are four steps: first, 'cash' has to be defined and classified into Notes and Bankers' Deposits at the Bank of England; secondly, the relation between these two kinds of cash and the operation of the Bank of England as a banker with the other banks as its depositing customers are outlined; thirdly, we must look into the regulation of the note issue; and fourthly, the other facet of the Bank's position as bankers' bank—its operation as 'Lender of Last Resort'—must be explained. Only then shall we be in a position to understand how the Bank of England can control the supply of cash, and what power flows from this control.

What is cash? There are two forms of cash. The first is any more widely acceptable form of money into which

people may wish to change their less widely acceptable bank deposits. The 'liquidity' of a bank is its ability to exchange deposits for cash of the first form when demanded by the public. The second form of cash consists of anything that a commercial bank considers as liquid as the first form. These definitions are extremely awkward; but they are, I believe, as little awkward as is consistent with true general statement of the present position. When we turn from the general definitions to apply them to English conditions our statements become more familiar. Cash of the first form consists of all legal tender money—silver and copper coin and Bank of England notes—this being the most widely acceptable form of money. Cash of the second form consists of the Bankers' Deposits at the Bank of England. In the course of decade after decade of trust in the Bank of England, because the Bank has always been able to offer its own notes in exchange for deposit claims entered in its books, there has arisen the tradition that the Bankers' Deposits are as useful to the commercial banks as are Bank of England notes.

'Cash' in England may then be reclassified as first, the silver and copper coin provided by the Mint at the instance of the Bank of England, and second, certain liabilities of the Bank of England—the bank notes and the Bankers' Deposits. Of these two classes of cash the first is unimportant—the amount of it varies little and, since banks and public alike endeavour to minimize their holdings of such a bulky form of money, no significant change in the total supply of money can be initiated by varying the supply of silver and copper coin. With bank notes and Bankers' Deposits the position is quite different. If these liabilities of the Bank of England are increased there may be an important increase in the supply of money. The commercial banks regulate their acquisition of earning assets, and therefore the creation of bank deposits, with an eye on their cash reserves. An increase in the notes and 'cash at the Bank of England' held by the commercial

banks leads to an increase in the aggregate of bank deposits, and vice versa. If it can control the notes in the commercial banks' tills *plus* the Bankers' Deposits with itself the Bank of England can control the aggregate of bank deposits in the country.

At this point we must recognize the fact that as the system works today the bank notes have become very much like silver and copper coins in that they behave as small change. The Bank of England does not ever by its own action directly add to the notes held by the commercial banks. The latter send round to the Bank of England for more or send some notes back as they choose, adding to or subtracting from their book balances at the Bank, just as members of the public draw notes from the commercial banks in exchange for bank deposits, or take notes to the bank and have their bank deposits increased. The Bank of England allows the commercial banks to draw out or pay in notes as they choose. When the commercial banks are drawing out notes the Bank Return shows, on the liabilities side, a decrease in Bankers' Deposits and, on the assets side, a decrease in Notes, and contrariwise.

To the commercial banks, bank notes, like deposits at the Bank of England, are idle assets. They want them only to meet the demands of the public and to provide what they consider adequate till money. Accordingly they customarily restrict their holdings of notes to about 4 per cent. of their deposit liabilities to the public. If they draw more notes from the Bank of England it is either because the public are wanting more for circulation or because their aggregate deposit liabilities have risen. Leaving aside the public demands for the moment let us remember that the deposit liabilities of the banks to the public will be determined by the action of the banks in acquiring assets. The banks will not have increased their assets, so increasing deposits, unless their cash reserves have increased. As their note holdings had, as deposits increased, fallen short of the customary 4 per cent., the other part of their cash

reserves—Bankers' Deposits at the Bank of England—must have increased. If the Bank of England can determine the volume of Bankers' Deposits with itself, and can supply whatever volume of notes is appropriate to that level of Bankers' Deposits, the Bank of England will be controlling the general operations of the commercial banks.

If the change in the commercial banks' cash reserves is initiated by the public the chain of events is somewhat different, but the influence is the same. Suppose, for example, that members of the public are demanding more notes for circulation. As they draw notes across the bank counters their deposits go down as their holding of notes goes up. The position of the commercial banks is simply the obverse of this: their deposit liabilities to the public are going down and their aggregate cash reserves are going down *by the same absolute amount.* The cash ratio has therefore fallen below the usual figure: the ratio of notes to deposits is very much lower and this is only partly compensated by the rise in the proportion that Bankers' Deposits bear to deposit liabilities (there being no initial change in the absolute amount of Bankers' Deposits). Then, if the Bank of England takes no action, the commercial banks will set about contracting earning assets, and so contracting deposits further, to the level appropriate to the new level of total cash. They will also draw some notes out of the Bank of England, Bankers' Deposits and Notes at the Bank of England both declining, while the composition of the commercial banks' cash reserves once more assumes its normal complexion. Let us picture this in a highly schematic arithmetical example:

POSITION I

(All figures in millions of £)

Bank of England Banking Department

Bankers' Deposits	240	Notes unissued	70
Other Liabilities	130	Other Assets	300
	370		370

Commercial Banks

Deposits	6,000	Cash at Bank of England	240
		Cash in tills	240
		Earning Assets	5,520
	6,000		6,000

Ratio, Total cash: Deposits . . . . 8 per cent.
Ratio, Cash at Bank of England: Deposits . 4 per cent. } approx.
Ratio, Cash in tills: Deposits . . . 4 per cent.

POSITION II

(after public has drawn £50 million notes into circulation)

Bank of England Banking Department

Bankers' Deposits	240	Notes unissued	70
Other Liabilities	130	Other Assets	300
	370		370

Commercial Banks

Deposits	5,950	Cash at Bank of England	240
		Cash in tills	190
		Earning Assets	5,520
	5,950		5,950

Ratio, Total cash: Deposits . . . . 7 per cent.
Ratio, Cash at Bank of England: Deposits . 4 per cent. } approx.
Ratio, Cash in tills: Deposits . . . 3 per cent.

POSITION III

(after commercial banks have reacted to fall in cash reserves)

Bank of England Banking Department

Bankers' Deposit	215	Notes unissued	45
Other Liabilities	130	Other Assets	300
	345		345

Commercial Banks

Deposits	5,375	Cash at Bank of England	215
		Cash in tills	215
		Earning Assets	4,945
	5,375		5,375

Ratio, Total cash: Deposits . . . . 8 per cent.
Ratio, Cash at Bank of England: Deposits . 4 per cent. } approx.
Ratio, Cash in tills: Deposits . . . 4 per cent.

Position III may never be reached. For if the commercial banks feel confident that the notes will be coming back from the public directly, they will not bother to disturb their earning assets. When the public 'pay the notes into their accounts' again the banks simply revert to Position I. This is what must happen to some extent every day the banks are open. In the morning spenders of money are drawing notes out to meet the day's needs. The notes pass into the hands of tradesmen. Just before three o'clock all the tradesmen's cashiers run round to the bank and in go the notes again. More notes are paid in first thing next morning perhaps (partly through 'night safes'). The banks perhaps approximate to Position I at 10.30 a.m., move towards Position II until 2.30 p.m., then till a little after opening time on the following morning they are moving back to Position I. The same thing happens at week-ends. On Friday afternoon the employers' cashiers go to the banks and draw out notes, these notes being paid out in wages that evening or Saturday morning. During Saturday afternoon and evening the workers and their wives are paying the money to tradesmen, and on Monday morning to the rent-collector, and back come the notes into the banks. On Friday morning and again on Tuesday morning the banks are in Position I, but they had moved to Position II by Saturday morning and then back again.

It is perhaps by now apparent to the critical reader that the word 'Notes' has been used throughout the last few paragraphs to mean 'Bank-notes *plus* silver and copper coin'. This is true even of the simplified accounts in the example. The silver and copper coin is a small part of the total, but it behaves in precisely the same way. It is, as we shall see when discussing the regulation of the note issue, the Bank's business to see that it always has an adequate reserve of notes and coin to meet the demands of the commercial banks. But notes and coin are alike in their behaviour. Notes behave as the 'small change' to bank deposits.

In deciding whether to pass to Position III the banks have to consider whether their cash ratio is unduly low for the moment only. But there is another possibility open, which will avert the necessity of passing to Position III even when the banks feel obliged to restore the cash ratio. The drop in the cash ratio has occurred because, in the face of a public demand for more cash for circulation, the Bank of England has remained purely passive. If, however, it is within its power to force an appropriate increase in Bankers' Deposits the cash ratio will be maintained. The commercial banks will find the composition of their cash unusual, till money being short; but they can replenish it by drawing on their deposits at the Bank of England. The final position is then as below:

POSITION III A

(after the Bank of England has provided more cash)

Bank of England Banking Department

£ millions

Bankers' Deposits	238	Notes unissued	22
Other Liabilities	130	Other Assets	346
	368		368

Commercial Banks

Deposits	5,950	Cash at Bank of England	238
		Cash in tills	238
		Earning Assets	5,474
	5,950		5,950

Cash ratios: as in Positions I and III

In this position the banks have not reverted entirely to Position I. The volume of deposits is smaller by the £50 millions that the public offered in exchange for the notes taken into circulation. The total supply of money of all kinds in the hands of the public will, however, be the same as in Position I—the notes in circulation being up by the same amount as deposit liabilities of the commercial banks are down. This result may be desired by the

Bank of England; but it may prefer a position in which the earning assets of the commercial banks are undisturbed. In this event the Bankers' Deposits must be forced back to the original £240 millions level, and the Bank of England will lose £2 millions more of notes to the commercial banks. The latter will revert precisely to Position I; but the Bank of England's position will be somewhat different:

POSITION III B

Bank of England Banking Department

£ millions

Bankers' Deposits . .	240	Notes unissued . . .	20
Other Liabilities . .	130	Other Assets . . .	350
	370		370

Commercial Banks

(as in Position I)

The reader can easily reverse the figures in order to follow the effects of the public's paying notes into the banks.

Whatever the public's action in drawing notes from or paying notes to the commercial banks, the Bank of England has control over the situation *provided that it can manipulate Bankers' Deposits at will.* Our analysis of the effects of a flow of notes from the banks to the public has been designed simply to show that, whatever the public is requiring in the way of cash, the volume of deposit liabilities of the commercial banks depends upon Bankers' Deposits at the Bank of England. How can the Bank of England control this figure?

The careful reader will perhaps already have noticed the clue to the answer in a certain difference between Position I and Position III B above. In the Position III B the commercial banks stand in precisely the same position as in Position I. In the Bank of England the liabilities' side is the same in the two positions; but the composition of the assets side is different. Between Position I and Position III B the notes resting in the Bank of England have

gone down by £50 millions—this amount having passed through the commercial banks to meet the increased demands of the public. The item 'Other Assets' has increased by £50 millions. The Bank of England has increased its earning assets by £50 millions, to provide the increase in cash required for circulation. To see what these 'Other Assets' might be we must turn back to the full Bank Return on pp. 84–8, where we see that the assets other than Notes (and coin) are Government Securities, the two classes of 'Other Securities' and, in the Issue Department only, gold. The Bank of England does not now, in fact, operate in gold on its own account, and the Bank provides additional cash only by buying securities. The change used sometimes to occur through the commercial banks calling in money-market loans, the discount houses being forced into the Bank, and Discounts and Advances rising. But if the Bank wants deliberately to help the banking system to provide the increase in cash without disturbance, it can do so by buying Government Securities. In the latter event it is said to have engaged in 'Open Market Operations'. The term Open Market Operations also covers the converse process—when the Bank sells securities in order to reduce Bankers' Deposits. Under the 'open-back-door' practice (to be described later[1]) the distinction between market initiative and Bank initiative has become insignificant. The Bank takes the initiative of fixing the rate at which it will operate in Treasury Bills and then takes in or puts out the amount of securities (Treasury Bills) necessary to release or absorb the right amount of cash for preserving market rate at the chosen level.

Just as the commercial banks in fact control their deposit liabilities to the public by acquiring assets of various kinds, offering book balances in exchange, so the Bank of England controls the level of its own liabilities by controlling the volume of its assets. A change in its assets sometimes simply

[1] See pp. 113–19 below.

occurs because the Bank of England complies with the wishes of the people who come to it offering assets—e.g. bills of exchange or gold, just as a commercial bank can change its assets by the bank manager's sitting in his office and saying that Mr. X may overdraw his account as he desires, or by the cashier's accepting notes offered over the counter. Alternatively the Bank of England can change its assets by going out into the market seeking securities or some other assets, just as the commercial bank can add to its assets by buying government bonds through the Stock Exchange, or by buying new offices from a builder.

The control of assets gives the Bank control over its total liabilities. But Bankers' Deposits, which we have seen as regulators of the commercial banks, are not the only liabilities of the Bank of England. The accounting liability to the Treasury as stockholder of course never changes, and may therefore be ignored. There remain the items Public Accounts and Other Deposits (Other Accounts). A rise in the Government's balances while the Bank of England's total assets (and therefore total liabilities) remain the same implies a fall in Bankers' Deposits.[1] By itself every payment made to the Government has this effect and every payment made by the Government has the opposite effect. If, the Bank of England's assets remaining unchanged, payments to the Government exceed payments by the Government, Public Accounts rise while Bankers' Deposits fall. This fall implies a decline in the cash ratio of the commercial banks. Any decided change of this kind would lead the commercial banks to make other balance-sheet adjustments and ultimately contract credit somewhat. A movement in Other Deposits (Other Accounts) would work in the same way, though such movements are rarely either pronounced or prolonged.[2] If the Bank of England, seeing the composi-

[1] Changes in H.M. Treasury Special Account are here ignored. See p. 176 below.

[2] Changes in some of these Other Accounts have special significance in relation to external transactions, but they are generally quickly compensated by transactions in Treasury Bills. See following chapter.

tion of its liabilities change, is unwilling to allow the disturbance to affect the operations of the commercial banks, it must manipulate its total assets (and therefore its total liabilities) in such a way as to counteract the effect on Bankers' Deposits of the change in, say, Public Accounts. If, for instance, heavy tax payments raise Public Accounts the Bank must expand its total assets, so that total liabilities are increased by the same amount as Public Accounts. Bankers' Deposits will then be unchanged and the commercial banks will be able to leave their earning assets undisturbed. As long, therefore, as the Bank of England is able to manipulate its total assets the existence of these liabilities other than Bankers' Deposits does not destroy the Bank's complete control over the amount of Bankers' Deposits.

We have in this section shown how the Bank of England controls the commercial banks' cash reserves in a general way only. Our answer to the question, how does the Bank of England control the amount of Bankers' Deposits? has been answered only by the general statement: By increasing and reducing its total assets. This general answer will be supplemented in Section VI by a detailed description of the mechanism by which the Bank actually operates on the cash basis. But before proceeding to this stage, a gap in our argument, hitherto glossed over, must be filled. The reader will have observed that to support a given volume of Bankers' Deposits the Bank of England must be able to issue over its counter as many notes as the other banks want to hold in their tills and as many notes as the public needs for circulation. In all the schematic examples given we have assumed that the Bank always has sufficient unused notes at its command, and it is high time to consider how the supply of notes is in fact regulated.

IV. *The Regulation of the Note Issue*

As, on the basis of increases in the level of Bankers' Deposits, the commercial banks proceed to increase the total of their earning assets and so add to the total of bank

deposits, it becomes necessary for them also to add to the notes in their tills, if they are to maintain the normal ratio of till money to total deposit liabilities. In order to secure this adjustment of till money to total deposits the banks exchange part of Bankers' Deposits for notes—or, in the contrary case of a contraction in deposits, notes for Bankers' Deposits. As the swelling deposits encourage rising prices and business activity, the change in the banks' till money requirements is likely to be reinforced by changes, in the same direction, in the public's demand for notes for circulation. In regulating the volume of Bankers' Deposits the Bank of England has always to bear in mind the fact that changes in this volume will find a reflection in changing demands for notes for both banks and public to hold. The Bank of England's control of the volume of ordinary bank deposits is thus theoretically subject to its note-issuing powers.

What is true of the influx and efflux of notes at the Bank of England is equally true of the influx and efflux of smaller change—silver and copper coin. The Bank of England must always be prepared to exchange Bankers' Deposits for silver or copper coin on demand, in order that the commercial banks may always be prepared to exchange the deposits of the public for silver or copper coin on demand. The Bank of England must therefore always have an adequate supply, else its regulation of Bankers' Deposits might be cramped. The English system of providing subsidiary coinage (for so the silver and copper coins are described by economists) does ensure that the Bank of England shall always have at its command an adequate supply. The coins are produced by the Royal Mint, which is a government department. The Royal Mint buys metals in the ordinary metal markets and engages labour, &c., to make the metal into coins. It makes its payments (just as does any other government department) by drawing on the Public Accounts at the Bank of England. It is always prepared to sell new coins on demand

to the Bank of England. If the Bank of England finds that its reserves of silver coin are running low (because the commercial banks have been drawing silver coin from it) it buys some more from the Royal Mint. The Bank pays the Mint by adding the appropriate sum to the balance of that government department, so Public Accounts are increased. Meanwhile the Royal Mint is paying for its raw materials, labour, &c., by transferring its bank balance (part of Public Accounts) to individuals. This, like any other government disbursement, adds to Bankers' Deposits —indeed, it restores them roughly to the level at which they stood before the commercial banks drew on them to obtain the silver coin wanted by the public. There is no restriction on the supply of this money. The Bank of England, in regulating the volume of Bankers' Deposits, need never stop to think whether it will be able to supply the appropriate amount of silver (and copper) coin. The Bank has a free hand.

Curiously enough this system does not apply to the issue of that other form of small change which we call notes. The Bank of England allows the commercial banks to draw out or bring in notes, just as it allows them to draw out or bring in silver, as they please, the transaction always being one of exchanging Bankers' Deposits for notes or coin, or vice versa. But whereas when it pays out coin the Bank of England knows that there is the inexhaustible fount of the Royal Mint behind it, always ready to replenish an ebbing stock, in the case of notes there is (at least in form) no such inexhaustible fount. No Royal Mint sells notes to it on demand. Instead there is its own Issue Department which, unlike the Royal Mint, is not allowed to coin money without restriction. By the Currency and Bank Notes Act of 1939 certain restrictions are imposed on the Issue Department. The Issue Department is allowed to issue notes to the value, at the official market price, of the gold it holds; but the Bank in fact holds practically no gold, so that this provision is ineffective. The effective

provision is that which allows the Bank to issue notes, 'unbacked' by gold, to the value of £300 millions, or whatever sum may be agreed upon by the Treasury on application by the Bank. Treasury permission to raise this 'Fiduciary Issue' above £300 millions for more than two years is subject to parliamentary review.[1] At the moment (December 1949) the Fiduciary Issue is £1,300 millions.

The superficial effect of these restrictions on the Bank's operations is that, in regulating the volume of Bankers' Deposits, it must always keep an eye on its reserve of unused notes. In effect, the Bank can add to its supply of notes only by securing Treasury consent to an increase in the Fiduciary Issue. In this way the Bank's policy was already, before the 1946 Nationalization Act, subject to explicit Treasury approval and ultimately to parliamentary review.

It is worth pausing for a moment to consider why, when its general operations were still in form free from government control, the Bank of England was so tied to Treasury approval whenever note-issue movements were in question. The complete freedom that marked the issue of coin stood in curious contrast to the hedging-about of the issue of bank notes. Why this contrast? The full answer is one of the most extraordinary stories in monetary history, far too long a story to tell here.[2] The main point is that while authorities long ago recognized that silver and copper coin formed no significant part of the total supply of money, and that an increased facility of supply thereof would induce no one to spend money more freely, bank notes were regarded as a substantial part, indeed sometimes the main part, of the total supply of money. Tying the supply of notes to the supply of gold therefore implied making the

[1] When the Fiduciary Issue is increased, the Banking Department 'sells' securities to the Issue Department: so the extra notes get among the assets of the Banking Department and become available for withdrawal by the commercial banks.

[2] The reader will find much of the story in Feavearyear, *The Pound Sterling*, and Gregory, *British Banking Statutes and Reports*.

supply of money dependent on the supply of gold—which was what people in those days wanted to do. Later, when it was realized that bank deposits formed the bulk of the supply of money, the chain became more complex. The supply of bank deposits, it was argued, depended on the supply of cash. The supply of cash depended on the supply of notes. Therefore tie the central bank's hands, in creating cash, by tying the supply of notes to the supply of gold. Then the supply of money would be regulated by the supply of gold—which was still the desideratum. Such was the position reached before 1914. People still paid lip-service to this 'Currency Principle' and to the Bank Charter Act of 1844 in which it was enshrined. They had, in fact, found ways of working the system on other lines, but still within the framework of the 1844 Act. When the system was re-enacted in 1928 the general principle of tying the note-issue to the supply of gold was retained; but it was made subject to Treasury power to adjust the Fiduciary Issue on application by the Bank of England. Even in 1939 more than a vestige of the old way remained. The note-issue, and therefore also the general operations of the central bank, remained nominally tied to gold; but the gold valuation became variable and the Fiduciary Issue became so elastic that the tie with the gold supply could almost be forgotten. The vital tie became that which subjected the Fiduciary Issue to Treasury approval. Thus the legal framework of subjection of the Bank to the Treasury was already established in 1939, and it was within this framework that the Treasury and the Bank worked hand in glove for some years before nationalization put the relationship on to a written basis more thoroughly consistent with the established conventions. Since 1939 the gold reserve has played no part in the regulation of the note-issue, which has become purely 'Fiduciary'.[1]

[1] For an entertaining and penetrating account of the present system of regulation of the note issue see D. H. Robertson, *Essays in Monetary Theory*, pp. 158–9.

It is often said that the central bank should have a monopoly of the note-issue in the country which is its sphere of operations. Yet in fact the Bank of England, which is often regarded as the pattern central bank, has no monopoly: certain Scottish banks enjoy a limited right of note-issue. The argument that the central bank should have monopoly of the note-issue is based on the realization that it must control the banking system by being the ultimate source of cash. If the other banks are free to provide themselves with cash by printing notes of their own, the central bank can be thwarted. This argument is perfectly sound provided that the notes of an individual bank are absolutely equivalent to other kinds of 'cash'. The less freely other cash can be replaced by commercial bank notes the less does it matter if the central bank has no monopoly. The controversy was a lively one from time to time in nineteenth-century England; but its relevance to-day is rather to those countries where new central banking systems are being established.[1]

The cash that originates in the central bank consists of its own notes and its deposit liabilities to the commercial banks (Bankers' Deposits in the Bank of England). If any commercial bank had the power to issue notes and its notes were absolutely interchangeable with the other kinds of cash, it would be free from all central-bank restraint on the expansion of its assets (and therefore its share of the total supply of bank money). Absolute interchangeability would imply readiness of the public, all over the country, to accept its notes as willingly as central-bank notes were accepted, and a willingness of other commercial banks to accept the notes of this commercial bank instead of its balances at the central bank in settlement of inter-bank

[1] e.g. in Canada, where the commercial banks' original antipathy to the establishment of a central bank was partly due to arguments that the central bank must take over the entire note-issue of the commercial banks. Had the note-issue powers required by a central bank been more fully understood the commercial banks might have been less fearful of a central-bank scheme.

indebtedness arising in the Clearing House. These are very serious qualifications. If they are not fulfilled the commercial bank that is expanding on the basis of its own note-issue will find its reserves of other cash (central-bank notes and deposits) being drained away by people and by banks who, having received payments in the commercial-bank notes, hasten to exchange them for the more widely acceptable forms of cash. A purely local bank, such as were most of the country banks of mid-nineteenth-century England, could clearly not regard its note-issue as freeing it from central-bank control. If it expanded too rapidly it would lose an essential part of its cash reserve.[1] It is not so easy to see what is to deter excessive issues by a number of commercial banks, all over the country, which keep in step with each other in their expansion, in the same way as, compelled by ebbs and flows of cash, they keep in step in any other expansion of deposits. What would then happen would be a decrease in the ratio of cash at the central bank (Bankers' Deposits) to deposit liabilities to the public all round. These reserves at the central bank are generally used for the settlement of Clearing House Balances; but if the banks were equally willing to accept from each other payment in each other's notes (i.e. if commercial-bank notes were regarded by the commercial banks as precisely equivalent to deposits at the central bank) they could afford to allow their reserves at the central bank to decline relatively to their deposit liabilities. Difficulties for the central bank arising therefrom can be averted if law (or custom having almost the force of law) imposes a quite artificial distinction between deposits at the central bank and commercial-bank notes. This can be done by law or custom compelling the commercial banks to hold at the

[1] It may, however, be argued that some time may elapse between the damaging local expansion of credit and the cash drain which puts a stop to it. The question was keenly debated by many writers on English banking in the first half of the nineteenth century. A review of the controversy will be found in Viner, *Studies in the Theory of International Trade*, pp. 154–65, and in Wood, *English Theories of Central Banking Control, 1819–58*.

central bank balances equal to a certain percentage of their deposits plus notes. This is quite a common provision in modern banking codes, and where it exists the general argument against allowing commercial banks to issue notes breaks down.[1]

If there is any feeling that unrestricted note-issues of commercial banks undermine the authority of the central bank, the law can restrict the commercial banks' issues in such a way as to restrict to the central-bank issue all power of significant variation.[2] The commercial banks can be granted the right to issue up to certain maximum amounts —maxima which it is expected will always, under any conceivable conditions, be approached. Then the commercial banks, though enjoying the income derived from these issues, are unable to indulge in a policy contrary to the will of the central bank, for the latter, controlling the variable part of the issue, can make the *total* note-issue and total cash what it chooses. This compromise is attractive when the legislature is unwilling to transfer from the commercial banks to the central bank all the income derived from note-issues[3] but does not want to leave the central bank's powers subject to any handicap. The compromise was devised by Peel for the transitional period, following the Act of 1844, during which the country issues were gradually terminated, and more recently it was used in Canada. The compromise system remains the system regulating the note-issue in Scotland.

V. *The Bank of England as Lender of Last Resort*

If the central bank is to control the monetary situation effectively, it must not only have power to issue cash in

[1] There remains some case against it in countries where banking is relatively undeveloped and where accordingly bank deposits are not the dominant part of the supply of money.

[2] Seasonal variations may quite harmlessly be allowed in commercial-bank issues.

[3] Notes are a possible source of income to the issuer, for he can issue them (like deposits) in exchange for earning assets.

the form of notes when the public prefers this form. It must also have the unquestioned duty to create more cash when the public and the banks demand more liquidity and this demand threatens undesired disturbance of business activity. In more recognizable terms—the Bank of England must lend without stint in time of financial crisis. This duty to act as lender of last resort is highly relevant to central banking control in that it lies at the root of the willingness of the commercial banks to work to a stable cash ratio. If the commercial banks had to provide for the extremities of panic demands for cash, they would feel it necessary to raise their cash ratios as soon as a cloud, however small, appeared on the financial horizon and, as danger became more threatening, they would attempt to raise their cash ratios further. Correspondingly, the growing confidence of quiet times would encourage them to reduce their cash ratios, with benefit to their profits. If, on the other hand, they are always confident that the central bank will come to the rescue of all well-conducted institutions in time of stress, they will feel under no compulsion to raise their cash ratios when danger threatens. They will allow their cash ratios to settle down at the lowest level consistent with convenience and respectability. This level, once reached, leaves no room for squeezing under the impulses of optimism, and the upshot is therefore a stable cash ratio adequate for the convenient transaction of business in the Clearing House and across the counter, and recognized as sufficient for public faith.

The position just described is the extreme one now reached in the English banking system, though elsewhere the cash ratio generally retains a greater or smaller degree of variability, to the embarrassment of the central bank. The perfection attained in the English system is due primarily to the many decades through which the Bank of England has unreservedly accepted its obligation to lend freely in time of crisis, but it has also been helped by the unique structure of the discount market

as a buffer between the central bank and the commercial banks.

Without going into the long and fascinating story of the Bank of England's evolution, we may say that the Bank came to accept its position of lender of last resort because, as a privileged corporation conducting the government's financial business, it could not stand idly by and see London's financial structure collapse in times of stress, and through bitter experience the Bank's governors learned that unstinted lending was the only remedy for such stress. The whole structure of credit depended upon the fact that everybody entitled to cash did not demand cash at once, and the growing intricacies of London's financial structure served not to qualify this truth but only to underline it. Only by hesitant steps did the Bank recognize the implication that it must underpin the structure by acting as lender of last resort, and there were many backslidings. But a trio of severe crises in the middle of the nineteenth century saw the close of the Bank's novitiate, and after the last of them the case was put with final cogency by Walter Bagehot in his classical pamphlet, *Lombard Street*. Since Bagehot wrote, no one has ever seriously questioned the doctrine that in time of stress the Bank must lend, and lend without stint.

With the passage of time, this doctrine has become second nature to English bankers and its influence on their conduct, if not altogether conscious, has worked itself out to the full. But the process of refinement of central banking tradition has been greatly helped by the position of the discount houses as intermediaries between the central bank and the commercial banks. The Bank must lend; but to whom? As the public draws cash from the ordinary banks, it is the cash reserves of the latter that call for reinforcement in times of crisis. The obvious borrowers at the central bank would therefore appear to be the commercial banks; and the laws of other countries frequently provide explicitly for direct help to them. But

traditionally bankers do not like borrowing from other bankers—it is thought a sign of weakness, and the grander titles given to the bankers at the central bank does little to modify this reluctance of commercial banks to come cap in hand to the central bank. This tradition has accordingly in many countries, including the U.S.A., retarded the action of the lender of last resort and so hindered the development of satisfactory control by the central bank. London, on the other hand, has been free from this particular impediment (though its cousins have sometimes stalked round the corner). Between the Bank and the banks there has stood a small group of discount houses, holding readily negotiable assets on the basis of readily callable loans from the banks. The Bank of England could be called upon to lend to the discount houses, so enabling them to pay off the 'money at call' they ordinarily borrowed from the commercial banks. The additional cash needed by the banking system comes into existence as the Bank of England lends, and it is channelled into the reserves of the commercial banks by route of the discount houses. The commercial banks would not, in the old days, have liked to borrow at the Bank of England, but they were perfectly willing to call in money positively owed to them by the discount houses, and they could call with success because they knew that the discount houses could always get money from the Bank of England. Reliance on the lender of last resort came more easily for being indirect; and it was London's unique institutional structure that allowed it to be indirect.

Because it is through the discount market that the Bank acts as lender of last resort to the banking system as a whole, the Bank's transactions with the discount houses are not treated as the ordinary business of its ordinary banking customers. They are governed instead by certain general rules applicable only to them and of cardinal importance to the Bank's function as a central bank. The bills brought to the Bank for rediscount or as collateral

security must *either* bear two reputable British names, of which one must be the acceptor's, *or* they must be Treasury Bills. Their currency to maturity is generally limited to three months, and in ordinary circumstances the Bank takes only bills that are within a few weeks of maturity. As to the *rate of discount* (interest) charged, there are two practices—the traditional Bank Rate practice (which the Bank has never formally discontinued and must therefore still be considered as held in reserve) and the simpler, less spectacular practice that has been invariable for some years now. Traditionally the discount houses could rediscount only at the published Bank Rate, a rate still fixed every Thursday by the weekly Court of Directors; and they could obtain advances (running usually for one week or a fortnight) at ½ per cent. above Bank Rate. This Bank Rate was (and is) normally above (sometimes far above) the discount rates ruling in the open market, so that whether the discount houses rediscounted bills at the Bank or obtained advances, the rate they had to pay (under this practice) was a 'penal rate' in the sense that it involved them in losses. The discount houses, being able to obtain money only at rates above those previously ruling in the market, would push up the rates at which they would do new business. City commentators would say that the market was 'in the Bank' (i.e. the discount houses were obtaining temporary help from the Bank) and that therefore market rates were rising. When 'the market' paid off its debts to the Bank, market rates would once more slip away below the official Bank Rate.

The alternative procedure, invariably followed in recent years, may be described as that of the 'open back door'. While the principle of doing business at the front door at the penal Bank Rate is maintained, the Bank actually allows the discount houses, or (what is a decided novelty of the nineteen-forties) the commercial banks directly,[1]

[1] The newspaper reports of the daily conditions in the market describe direct transactions between the Bank of England and the commercial

temporary accommodation at the back door (i.e. through the Bank of England's own broker in the market) at a rate that does not disturb the level of market rates. The Bank's operator is always in touch with the market and has an understanding with the discount houses that they can tide over temporary stringency by bringing Treasury Bills to him. He will take the bills at the rate (for a long while $\frac{1}{2}$ per cent.) approved by the Bank as the proper level for market rates. When taking in bills (i.e. putting out cash) the Bank of England has special regard for dates in the early future when the Government will be releasing large sums of cash to the market, and the Bank tells the discount houses that it requires bills falling due for repayment on such a date. For example, on certain days in January 1950, when the Bank had to give aid to the market, it called for bills maturing on 15 February, because on that date a large block of Exchequer Bonds fell due for repayment, and the more the authorities could (by taking in the Treasury Bills) reduce the other cash releases they would have to make on that date, the less would be the market disturbance when 15 February came round. In choosing its dates, the Bank likes to have very near dates (mostly within a month) so that the market tightness will soon recur, and the market will thus be kept 'on its toes' without further special action by the Bank of England. Now it so happens that Treasury Bills tend to be held early in their lives by the discount houses and then to be sold, as they approach maturity, to the commercial banks.[1] A large proportion of the bills near maturity is therefore generally in the hands of the commercial banks, and the dates demanded by the Bank of England

banks as '*in*direct help'. This is because the reporter is looking at the business from the point of view of the discount houses (whilst I look at it from the point of view of the cash reserves of the commercial banks).

[1] This custom (the strict version of which is that the London clearing banks will not hold Treasury Bills in the first week of their lives) originated in the 1930's, when the banks came to a working agreement with the discount houses designed to protect the latter from being squeezed out of existence.

when it aids the market may therefore appear only (in sufficient amount) on bills that are owned by the commercial banks. The Bank of England, hearing that the market is £2 millions short, may say, 'We will take £2 millions of Treasury Bills, maturing on 15 February' and hear that the discount houses have scarcely any such bills, having sold all of that date to the commercial banks two or three weeks earlier. In this circumstance the Bank of England buys the Treasury Bills directly from the commercial banks. The latter thereby have their cash reserves directly strengthened by £2m., and allow the discount houses that much more money overnight,[1] so allowing the latter to balance their books (i.e. pay off all loans called in). The discount houses, of course, carry no cash over, so the net effect of the operation is that the Bank of England has added £2m. to the Bankers' Deposits in its own books—i.e. to the 'cash reserves' of the commercial banks. Owing to the Bank of England's preference for nearly mature Treasury Bills (of a convenient date) when it aids the market, the occasions when the suitable bills are in the hands of the commercial banks are very frequent, and this direct channel between the Bank of England and the cash reserves of the other banks is now very commonly used.

The Bank's operator is similarly ready to sell bills (to absorb a superabundance of cash in the market) at the fixed rate, and the market rate for Treasury Bills therefore cannot move appreciably from the Bank's own operating rate. (The Bank, by choosing carefully the dates of the bills it takes in at other times, minimizes the occasions when it has to sell bills in this way.) It is as though at the Bank's back door there were an automatic machine with reversible action, from which Treasury Bills could be obtained for cash or cash for Treasury Bills at that fixed rate which the Bank wishes to see prevailing in the market.

[1] In effect the banks, on selling bills directly to the Bank of England, cancel their 'calls' on the discount houses—the calls that occasioned the scarcity of funds now relieved by the Bank of England's purchase of bills.

In order to illustrate the operation of the open-back-door machine, we shall consider what happens when an excess of government receipts over government disbursements causes a net transfer from the Bankers' Deposits (i.e. from the cash basis) to Public Accounts at the Bank of England. For this purpose we can ignore all other payments to and fro, which will actually be proceeding at the same time, and watch solely the effects of a net payment by members of the public to the Government. The individuals draw cheques, for say £25 millions, on their accounts with the commercial banks, the cheques being in favour of the Government. The Exchequer officials 'pay the cheques into the account' at the Bank of England. Public Accounts rise by £25 millions. The Bank of England now holds among its assets these cheques, claims against the commercial banks. It presents the cheques to them, taking at the same time £25 millions off their balances with it—Bankers' Deposits have decreased by £25 millions. The cash reserves of the commercial banks have fallen by £25 millions and their liabilities also fall by that amount, for they deduct the amounts of the various cheques from the balances (deposits) of the customers who have drawn them. At the outset suppose the position to have been:

POSITION I

Bank of England Banking Department

£ millions

Public Accounts	10	Government and Other Securities	255
Bankers' Deposits	240	Notes	50
Other Liabilities	55		
	305		305

Commercial Banks

Deposits	6,000	Cash in hand and at Bank of England	480
		Earning Assets	5,520
	6,000		6,000

Then, after government receipts have exceeded government disbursements by £25 millions, we have:

POSITION II

Bank of England Banking Department

£ millions

Public Accounts	35	Government and Other Securities	255
Bankers' Deposits	215	Notes	50
Other Liabilities	55		
	305		305

Commercial Banks

Deposits	5,975	Cash in hand and at Bank of England	455
		Earning Assets	5,520
	5,975		5,975

Notice that up to this point there has been no change at all in the assets of the Bank of England. The Bank has taken no positive action: a mere redistribution of its liabilities has occurred. As a result of this change, the commercial banks find that their cash ratio is slightly below the standard 8 per cent. and, in the absence of help from the Bank of England, they would proceed to contract their assets and a general process of monetary contraction would be set in train. As their cash is now £23 millions[1] below the level required for an 8 per cent. cash ratio, they call in the first instance for repayment by the discount houses of £23 millions of their 'Money at Call'. The discount houses, to obtain the cash wherewith to pay off the calls from the banks, have to sell Treasury Bills to the Bank of England. Under the traditional practice they might alternatively have sought Advances for a week or so at the Bank of England; but whether they sold bills or obtained Advances, they would have had to pay either Bank Rate or a higher rate—

[1] 23, not 25, because the drop of £25 millions in their deposit liabilities reduces their cash requirement by 8 per cent. of £25 millions (= £2 millions).

a good deal more than the ordinary level of market rates. This dearness of accommodation at the Bank of England would of course have given market rates a twist upwards. Under the current open-back-door practice, the discount houses obtain the required cash by selling Treasury Bills to the Bank of England's operator in the market, and he buys Treasury Bills from them at the conventional discount rate of ½ per cent. (as contrasted with the official Bank Rate, which stands at 2 per cent.).

The effect on balance-sheets is the same under the current as under the traditional practice. As the commercial banks call £23 millions from the discount houses, the latter sell Treasury Bills to the Bank of England, and we can imagine a momentary Position III in the Banking Department of the Bank of England, as follows:

	£ millions		
Public Accounts	35	Government and Other Securities	278
Bankers' Deposits	215	Notes	50
Other Liabilities (including Accounts of Discount Houses)	78		
	328		328

The Bank of England has taken £23 millions of Treasury Bills (so increasing its Government and Other Securities from £255 to £278 millions) and has credited the discount houses with £23 millions in its books (so increasing its Other Liabilities from £55 to £78 millions). The discount houses then meet the calls of the commercial banks, by drawing on their accounts at the Bank of England cheques in favour of the commercial banks. The latter 'pay in' the cheques to the Bank of England (through the Clearing House) and the Bank credits the sums to Bankers' Deposits, debiting the Other Liabilities. We then have Position IV (see p. 118).

The banks may then choose to restore their former proportion of Till Money to Cash at the Bank of England, and they can do this by withdrawing £1 million in Notes from

the Bank of England. This refinement would leave their own balance-sheets unchanged, but would cause at the Bank of England a fall of £1 millions in Bankers' Deposits and correspondingly in Notes held in the Banking Department.

POSITION IV

Bank of England Banking Department

£ millions

Public Accounts	35	Government and Other Securities	278
Bankers' Deposits	238	Notes	50
Other Liabilities	55		
	328		328

Commercial Banks

Deposits	5,975	Cash in hand and at the Bank of England	478
		Earning Assets	5,497
	5,975		5,975

The action of the Bank of England in taking up Treasury Bills thus allows the commercial banks to maintain their conventional 8 per cent. cash ratio, and to distribute this cash between its two forms as they desire. And whether the Bank operates in the traditional way (at Bank Rate or higher) or by the modern mechanism of the open back door, its action is entirely adequate to provide the banks with the cash necessary to support their deposit liabilities. Similarly, if the public draws out exceptionally large amounts in notes from the ordinary banks, the latter can rebuild their cash ratios to 8 per cent. by forcing the Bank of England, in its capacity as the ultimate source of cash, to take up more Treasury Bills. For any contingency this function of the Bank of England provides assurance of adequate cash for the conduct of business. The only difference (and it is an important one) between the traditional system and the modern one is that traditionally the operation of the Bank as lender of last resort caused a movement

in short interest rates, whereas the new system guarantees cash at the fixed interest rate. But this fixed rate of interest is dictated by the Bank of England, which retains the right to raise it without notice.

VI. *The Bank of England's Initiative in Regulating Cash*

To complete the picture of the Bank of England as the controller of the banking situation, it is now necessary to explain how the Bank of England can, even in the present system, take the initiative in operating on the banking position. If the schematic example given in the previous section is re-examined, the reader will perceive that, though the Bank's operation as the ultimate source of cash is nowadays performed in a manner calculated to leave short interest rates undisturbed, the *status quo* is not entirely restored. In our example, the residual net changes that may become significant are two: first, the total of ordinary bank deposits (the public supply of money) is down by £25 millions, and secondly, the Money Market Assets of the commercial banks are down by £23 millions, a sum disproportionately large in relation to the decline in their deposit liabilities (since the 'Earning Assets' shown at each Position include a constant amount of Investments, Advances, &c.). The first change reduces the liquidity position of the public and the second change reduces the liquidity position of the banks. If changes of this kind are large and prolonged they will prompt both public and banks to attempt to restore their liquidity positions by selling government securities, so depressing the price of these—that is to say, forcing rates of interest (other than the pegged rates for Treasury Bills, &c.) upward. As we shall see in Chapter 7, this general rise of interest rates is likely to set deflationary forces in motion, reducing prices and employment. If this deflationary effect is not desired by the Bank of England, it must take positive action to offset the original

decline in ordinary bank deposits. The open back door is not enough for this purpose.

The Bank's offsetting action must be the purchase of medium-term and long-term securities from the investing public, and theoretically these purchases must, in the case we have considered, total £25 millions. If we start from Position IV in the previous section, the Bank must also, to restore the *status quo*, sell £23 millions of Treasury Bills to the market (banks plus discount houses), and this latter step will in fact be taken automatically through the back door, as an incidental result of the Bank's payments for the securities that it is purchasing from the public. Though these two processes will, in fact, proceed simultaneously, the reader will perhaps follow them more easily by separation into successive steps in the following analysis. We suppose that, starting from Position IV, the Bank of England purchases from the investing public £25 millions of government securities other than Treasury Bills.[1] The Bank of England pays for these securities by drafts which the sellers of securities pay into their own bank accounts. The commercial banks present all the drafts (through the

[1] This step is itself a simplification, in that the impact of the Bank's purchases will fall upon the discount houses who (as explained in Section IV of Chapter 3 above) act as a 'cushion' in the market for medium- and long-term government securities. They will, when they part with these securities, wish to enlarge their holdings of Treasury Bills, and through the open back door these Treasury Bills will have to be supplied by the Bank of England (to prevent competition for scarce Treasury Bills from forcing the rate below the desired ½ per cent.). The impact effect on bank deposits and the cash base will therefore be completely neutralized, just as it would if the Bank of England bought more Treasury Bills. But the Bank's purchases of these other government securities will (unlike its purchases of Treasury Bills) bid up the prices of them (i.e. the discount houses, in their capacity as cushion for the gilt-edged market, part with the securities but only at rising prices). These higher prices will gradually tempt sellers from among the outside public, who will part with securities to the discount houses which, as they replenish their bond portfolios, push Treasury Bills back on to the Bank of England again. In the example analysed in the text this process is supposed to be short-circuited by the appearance of members of the outside public as sellers of securities in the first place.

Clearing House) to the Bank of England and are credited therefore with £25 millions added to Bankers' Deposits. So we arrive at

POSITION V

Bank of England Banking Department

£ millions

Public Accounts	35	Government and other Securities:	
Bankers' Deposits: 238+25 =	263	278+25 =	303
Other Liabilities	55	Notes	50
	353		353

Commercial Banks

Deposits: 5,975+25 =	6,000	Cash in hand and at the Bank of England: 478+25 =	503
		Earning Assets	5,497
	6,000		6,000

At this point the commercial banks recognize that they have excessive cash in relation to their £6,000 millions of deposit liabilities, and they seek to reduce their cash to £480 millions (8 per cent. of £6,000 millions) by buying more Treasury Bills from the discount houses. The latter are experiencing no shortage of funds, and have no more Treasury Bills than before available. The Bank of England, therefore, in order to prevent a scarcity of Treasury Bills from depressing the rate of discount below ½ per cent., has through its market operator to sell £23 millions of Treasury Bills. The automatic machine works in reverse. Thus we reach Position VI (p. 122).

If Position VI is compared with Position I (p. 115) it will be noticed that the only change is in the Bank of England, where an addition of £25 millions to government securities balances (and so neutralizes the effects of) the addition of £25 millions to the government's balances. It is by the purchase of securities *other than Treasury Bills* that the Bank of England has been able to undo the

contractionist influence of the accumulation of money in the hands of the Government. The words just italicized signify one of the important effects of the innovation of the pegging of the Treasury Bill rate by the reversible automatic machine at the Bank of England's back door. When the first edition of this book was written (1937) the Bank of

POSITION VI

Bank of England Banking Department

£ millions

Public Accounts	35	Government and other Securities:	
Bankers' Deposits: 263—23[1] + 240		303—23[2] =	280
Other Liabilities	55	Notes	50
	330		330

Commercial Banks

Deposits	6,000	Cash in hand and at the Bank of England: 503—23[1] =	480
		Earning Assets: 5,497 + 23[3] =	5,520
	6,000		6,000

[1] Charge against Bankers' Deposits resulting from discount houses cheques paying Bank of England for Treasury Bills taken from Bank's operator.

[2] Treasury Bills sold to market.

[3] Addition to Treasury Bills, bought (via discount houses) from Bank of England.

England's discretionary action on the cash basis took the shape of dealings in Treasury Bills, the market rate of discount on which could and did fluctuate. Now the Treasury Bill rate is pegged by the Bank of England's undertaking to provide the market with whatever volume of cash it desires—neither more nor less—at the fixed rate of $\frac{1}{2}$ per cent. Any operations the Bank itself initiated in Treasury Bills would therefore be undone by opposite action by the market at the open back door.[1] If it wants to

[1] Cf. note 1, above.

influence the general liquidity situation of banks and public—and so influence those interest rates which are *not* pegged—the Bank must operate in securities other than Treasury Bills.

Subject to this proviso, the Bank can neutralize the influence, on the monetary situation and the state of the capital market, of any change in the public's supply of *money resulting from transfers to the Government* (as in the example just analysed) or from net payments to 'foreigners' outside the English banking system (see Chapter 6). Alternatively it can accentuate the effect of such changes—by selling securities as the public loses money to the Government or foreigners; or by buying securities in the reverse case. Again, it can by operations in securities offset the effects of a change in the disposition of the public towards securities—it can prevent public bearishness[1] from forcing interest rates upward, or it can prevent public bullishness[2] from forcing interest rates downward. In these ways the Bank of England, as the ultimate source and creator of cash, retains considerable power to influence the economic situation, although by its pegging of the Treasury Bill rate it has lost its old power to regulate the cash basis by deliberate operations in these very convenient Treasury Bills themselves. Provided it is willing to operate in other securities (as the Macmillan Committee in 1931 recommended it should) it can still operate effectively on the supply of money and so upon the structure of interest rates. And it must never be forgotten that the pegged Treasury Bill rate is pegged by the Bank of England, which can move the peg if it wishes. In Chapter 8 we shall see how these powers of the Bank of England were reinforced by other authoritative influences and used in a spectacular if somewhat questionable way.

[1] An expectation that security prices will fall—causing the public to try to sell securities.

[2] An expectation that security prices will rise—causing the public to try to buy securities.

VII. *Central Banking in the United States*

In the earlier sections of this chapter we have been concerned with the general principles of central banking technique, with special reference to the English system. We proceed now to show how these general principles are applied in the somewhat different structure of American banking. The particular technique of central banking which has been devised to suit the American structure and American susceptibilities is bound to be a pattern for central banking operations in many other countries. But in the newer countries of the world, particularly the British Dominions, the technical problems of central banking are so different from either British or American conditions that we defer discussion of them to a separate chapter at the end of the book.

Let us emphasize at once the applicability to American conditions of the fundamental principles of central banking which have been discussed above. In the United States as in Britain the power of the central bank over the commercial banks is dependent on the central bank's position as an ultimate source of cash. Cash in America consists of Bankers' Deposits at the Federal Reserve Banks and the bullion certificates (both gold and silver certificates) which are issued by the Federal Treasury in exchange for bullion. The bullion certificates take the place of the Bank of England notes issued against gold. There are a number of other types of notes in circulation, but all significant changes in their supply are now under the control of the Federal Reserve System.[1] The Federal Reserve System can add to the supply of cash by adding to its assets, and contract the cash reserves of the banking system by selling assets, just as the Bank of England does. It can put its own price on the use of money which it creates when it functions (as it is

[1] It is impossible in the space of this book to give all the complicated details of the American monetary system: the reader who wishes to pursue this subject further may care to consult my *American Banking System* (1948) and the reading list given at the end of it.

bound by law to do) as lender of last resort or when, like the Bank of England, it practises an 'open-back-door' system. In all these ways the American system is parallel to the British. The significant differences are four: (1) in America the commercial banks have direct access to the central bank as lender of last resort, and there is normally some commercial-bank indebtedness to the central bank, whereas in Britain the contact is indirect, the commercial banks being customarily able to secure cash from the central bank only through the channel of the discount market; (2) whereas in Britain the cash ratio is customary only, and is one flat ratio applied to all deposits, in America the cash ratios are different according to the classes of deposit liabilities; they are legal minima, and they have been subject to revision by the central bank; (3) since about 1934 the actual cash reserves of the commercial banks have been much in excess of the legal minima, and spectacular changes in these 'excess reserves' have been an important index of the banking weather; and (4) in operating the 'open-back-door' system, the Federal Reserve Banks have operated in long-term securities as well as short-term securities, and have thereby directly controlled long-term as well as short-term interest rates.

The difference of connexion between central bank and commercial bank is due to the historical difference that whereas in England there has been a discount market to act as intermediary, the Federal Reserve System was established in a country without a comparable market. In English conditions, it will be remembered, a bank requiring to replenish its cash reserves calls in loans which it has made to discount houses, and the discount houses, by getting help from the Bank of England, are able to provide the Bankers' Deposits which the bank is wanting.

The United States, when setting up their central banking system, could not establish a discount market overnight, so that their choice of the alternative system was Hobson's choice. Any member bank desiring to replenish its cash

reserves can do so by taking to its Federal Reserve Bank certain classes of assets[1] and borrowing directly from the Reserve Bank, just as a discount house would borrow from the Bank of England. Or it can rediscount eligible bills there, again as the discount house might in England. Under these arrangements there are always a few member banks in debt to the Reserve Banks. The member banks can accordingly thwart a Reserve Bank sale of securities (which diminishes member bank reserves) by borrowing the same amount from the Reserve Banks. The Reserve Bank, however, fixes its own price for the transaction, just at the Bank of England does, and by fixing these 'rediscount rates' the Reserve Banks will obviously influence the rates at which the commercial banks feel themselves able to lend to ordinary borrowers. Also, in America as in the world generally, there is the tradition that a bank should, if possible, avoid borrowing from another bank: to be in debt to another bank is thought a sign of weakness. Accordingly, member banks finding themselves in debt to the Reserve Bank (having had to borrow to raise their reserves to the legal minima) would hasten to contract their loans. In the nineteen-twenties, when excess reserves were exceptional, this prejudice against indebtedness to the Reserve Banks was an important cog in the machine by which the Reserve System guided member banks into expansion or contraction, and it may become so again. Meanwhile, the rediscount rates announced by the Reserve Banks have become practically index figures, not themselves effective for many transactions but being used by bankers as indices to which their own lending rates should be related. In this respect the American system has grown very like the English system of the nineteen-twenties. But in both systems alike the most important rates fixed by the central banks are now not the official rediscount rates but the rates appli-

[1] 'Eligible' assets were originally certain narrowly defined classes of 'self-liquidating paper'. But under the Act of 1935 the Reserve Banks were virtually given discretion in the definition of eligibility.

cable to the 'open-back-door' transactions—the rates, that is to say, at which they make cash available (buy securities) or absorb surplus cash (sell securities) in the market.

The second great difference between the American and English systems is that while in England the cash ratios of the commercial banks are determined by the banks' own observance of custom only, in America the cash ratios are determined by the Board of Governors of the Federal Reserve System within ranges set by law. Against Time Deposit the range is 3 per cent. to 6 per cent., and against Demand Deposits 7–14 per cent., 10–20 per cent., or 13–26 per cent. against Demand Deposits according to the geographical position of banks. The ratios fixed by the Board in November 1949 were 5 for Time Deposits, and 22, 18, and 12 for Demand Deposits. Member banks in New York and Chicago, where the banks in the correspondent system have great liabilities to other banks, have to maintain the highest cash ratio. Member banks in other so-called reserve cities have to maintain the intermediate ratio, the lowest ratio applying to all other banks. These legal minimum cash ratios refer to the proportion which member-bank reserves at the Reserve Banks must bear to the member banks' deposit liabilities to the public. Till money is not included in legal reserves. The legal ratios detailed above are comparable to the English ratio of Bankers' Deposits at the Bank of England to total deposit liabilities to the public, which is little more than half the agreed total cash ratio of 8 per cent. In some other countries the cash to which the legal ratio is applied may include forms of cash other than deposits at the central bank.

The distinction for this purpose between Time Deposits (Deposits cashable only at notice of at least one month) and Demand Deposits is due to the limitation of the public's right to exchange Time Deposits for cash. This point shows how the cash reserve ratios were based on the protection of the public against banking illiquidity rather than on the significance of the cash ratio for central-bank control. The

very much lower ratio to be held against Time Deposits than the ratios to be held against Demand Deposits may be, as we shall see in a later chapter, a source of embarrassment to the efficiency of central-bank control. Despite much discussion on this point, the confusion between legal regulation of cash reserves to protect the public against banking illiquidity and legal regulation of cash reserves to give control to the central bank has continued to appear in new central-bank charters (as for example, in those of New Zealand, the Argentine, and India). For purposes of central-bank control one flat rate is highly desirable. Open-market operations may then be relied upon to cause a predictable change in the aggregate supply of bank deposits in the country.

In the U.S.A. the member banks may not allow their cash reserve to fall below the legal minima; but there is no law to prevent them from raising their reserves *above* the legal minima. As we have seen in an earlier chapter, however, the profit motive may normally be relied upon to prevent the maintenance of excess reserves. The exception to this rule occurs when the earning assets available for banks to take up are not, in one way or another, sufficiently attractive. In America such circumstances were at work during the nineteen-thirties, when the supply of bank cash was greatly increased by the gold influx. The demand for commercial loans was at a very low ebb, reaction after the banking crisis had made the banks unwilling to touch whole classes of assets, and they had taken up enormous amounts of government securities. As yields on these securities were very low and their future prices uncertain, the banks were unwilling to stuff their portfolios with government securities *ad infinitum* and preferred to allow their cash ratios to rise far above the old legal minimum. A position arose in which the surplus reserves of the member banks were so great that it became simply impossible for the Reserve System to bring any contractionist pressure to bear by selling securities. Their 'ammunition' might well have been

exhausted long before member-bank reserves had been brought down to the legal minima. With boom conditions already appearing, the central bank was powerless to do anything to check an enormous inflation of bank credit as the demand for it developed, and it was to meet this extraordinary position that the fixed cash ratios of the earlier law were replaced by the ranges (detailed on p. 127 above) within which the Board of Governors of the Federal Reserve System might vary the required ratios. By exercising its power to raise the ratios the Board has been able to prevent undesirable expansion of bank assets and liabilities. A rise in the required ratio, by 'immobilizing' what was formerly excess cash, is equivalent to a destruction of cash by open-market security sales. Contrariwise, a fall in required ratios, by releasing cash from legal requirement, adds to excess reserves and so encourages general expansion by the banks.

The Federal Reserve System exercised this power to vary the cash ratios for the first time in the partial boom of 1937, but early collapse of the boom led the Board to reverse engines long before the banking system was fully stretched. The excess reserves position therefore continued right down to the Second War. Then the financial exigencies of the Government made it necessary for easy monetary conditions to be maintained continuously, and the System therefore, in exercising its power to vary cash ratios, always saw to it that there were enough excess reserves left to make the borrowing operations of the Treasury easy. This long period of excess reserves has so 'acclimatized' American bankers that a disposition of bankers to sell investments (always a sign of scarcity of cash) sometimes appears when excess reserves over the country total as much as $1,000 millions (required reserves are of the order of $15,000 millions). A rise in required cash ratios sufficient to bring excess reserves down from say $2 billions to $1 billion is therefore a spectacular change which may frighten bankers (and perhaps security markets) into a deflationary frame

of mind, even though it leaves almost every bank in the country still with some excess reserves.

The operation of the central bank on the cash position of the banking system as a whole has in the U.S.A., as in England, been considerably changed by the adoption of the 'open-back-door' system of stabilizing money-market conditions. As we have seen, the Bank of England has effectively stabilized short-term rates of interest by being prepared, through its broker, to operate either way in Treasury Bills at the fixed rate of $\frac{1}{2}$ per cent. per annum. Whenever the market rate is sagging, the Bank's operator sells Treasury Bills (absorbs cash), and whenever the market is short of cash, the Bank's operator prevents the rate of discount from rising by buying Treasury Bills at the fixed rate. Similarly, the Federal Reserve Banks have completely stabilized short-term rates by willingness to buy or sell short-term Treasury paper at fixed rates. But the Reserve Banks have gone much further than this, and for years at a time have held the prices of long-term government securities stable by buying or selling them at fixed prices. The Bank of England has not in general attempted thus to control long-term interest rates, although it has occasionally intervened in the market with considerable effect.[1] The American practice of stabilizing long-term as well as short-term markets has had the important effect of making all of an American commercial bank's holding of government paper highly liquid (since it could be sold virtually without loss to the Reserve Bank); it has therefore worried all those who realize how a central bank's influence on the economic situation depends upon its control of the cash basis.

It would, however, be wrong to suppose that this adoption of the open-back-door system represents an abdication of all a central bank's power. The central bank is still a monopolist, having a monopoly of the supply of cash. It

[1] As, for example, its small but strikingly successful intervention to check a demoralized market in November 1949. See also Chapter 8.

used, in general, on the basis of its gold stock to fix the supply of cash and let the market conditions fix the price (the rate of interest or discount). Now it fixes the rate of interest and lets the market have what cash it chooses to take at that price. This monopolist, like any other, can either fix supply or fix price. It cannot fix both at once. The change has been a switch from the fixed supply to the fixed price policy. The reasons for and implications of this change must be discussed in another chapter. Meanwhile we must note that in the U.S.A. as in England the central bank has control, if it chooses to exercise it, of the supply of cash and thereby is enabled to influence the activities and attitudes of the commercial bankers in the country at large; and we must consider whether by activities other than this control of the cash basis the central bank in any way hinders its primary objects.

VIII. *The Central Bank as Banker to the State and to Others*

The central bank's control over the commercial banks depends on its power to create cash and on the commercial banks' need to relate their liabilities to their cash reserves. The central bank's power to create cash depends on the fact that claims against it—its deposit or note liabilities—are regarded as cash. The more I O U s it likes to create, the greater is the supply of cash. The deposits at the central bank which stand in the names of the commercial banks are the basis for the whole superstructure of bank deposits in the country. But if the central bank acts as banker to institutions other than the commercial banks, part of its liabilities are not used as cash at all, but form part of the total of ordinary bank deposits in the country. A redistribution of central bank liabilities, in favour of Bankers' Deposits and against Other Accounts, in effect causes an increase in the cash basis of the commercial banks. Such a redistribution can be caused in the same way as when the deposit liabilities of the commercial banks are redistributed

by one customer drawing cheques in favour of other customers. Clearly the power of the central bank's customers to cause, in this way, a change in the cash basis of the banking system, without the central bank's taking any action at all, is potentially a source of embarrassment to the central bank. It does not, as we have seen in an earlier section, destroy the central bank's control: for the central bank can neutralize the redistribution of liabilities by adding to or subtracting from its total assets. But the fact remains that acting as banker for persons or institutions other than the commercial banks does involve it in operations that would otherwise be avoided. The addition of these complications to the difficult business of central banking must be counted a disadvantage of the central bank's acting as banker for anyone except the ordinary commercial banks.

This argument has equal force, whether we are considering the State or ordinary business people as customers of the central bank. A rise in Other Deposits (Other Accounts) at the Bank of England is just as disturbing to the supply of cash as is an equal rise in Public Accounts. In practice the changes in Public Accounts are much the more important source of disturbance—for Public Accounts are the balance of one huge institution, whereas Other Accounts contain a number of relatively small balances. A temporary disturbance of, say, 20 per cent. in one of the balances which comes under the item Other Accounts may well be offset by opposite movements in other balances which also come under that heading. But a 20 per cent. change in the balance of the single customer (the State) can cause an appreciable disturbance in the cash basis. On this count, therefore, the case against the central bank acting as banker to the Government might be stronger than that against its acting as banker for a number of other ordinary customers.[1]

[1] In England the variation in Public Accounts is probably not as serious as would appear from the weekly Bank Returns. It is understood that the Treasury endeavours to avoid any marked variations in Public Accounts.

But there are two other arguments to be considered. When the central bank does ordinary banking business for customers in the same way as the other banks do it is entering into competitive relations with the commercial banks. This is likely to be derogatory to the central bank's authority over the commercial banks: they may well feel themselves not obliged to listen to the requests of a competing bank. It was even suggested, when these circumstances arose in earlier English banking history, that the commercial banks themselves might cease to be customers of the Bank of England if the latter continued its competitive attitude. Their deposits with the central bank bring them no return: then why, say the commercial banks, should the central bank make profits by lending funds to people who might have borrowed from us? Antipathies of any kind between the central bank and the commercial banks are most undesirable. In the interest of the smooth working of the system there should be an atmosphere in which mutual help is possible at any time. This is a serious argument against the central bank's participation in ordinary banking business. It applies to private custom, not to the custom of the State: for the central bank is, after all, a State-created institution, and the commercial banks can scarcely complain if the State takes its own substantial banking business to its own institution.

Under the influence of arguments such as these most central banks are prohibited from doing ordinary banking business with the public. The Bank of England has still, as a legacy from its earlier history, a number of ordinary customers, but for many years now it has signified its unwillingness to compete with the joint-stock banks by refusing to accept new customers. Old accounts are allowed to run on; but it is not inconceivable that the course of time will see a complete extinction of this relic of earlier days.

The Bank of England also includes under the heading Other Accounts the balances of the Indian and perhaps some other governments that bank with it, and those of

foreign and Dominion central banks. But with the great development of the market in Treasury Bills these accounts do not appear to be subject to very great variations—the major variations in London balances of other governments and central banks are probably absorbed in variations in their holdings of Treasury Bills. Before 1914, when the market in Treasury Bills was far more restricted, these balances at the Bank of England used to be subject to great variation; but the Bank of England managed to use these variations rather to its own advantage in controlling the market.[1]

There are some special arguments for the central bank's undertaking, indeed seeking, ordinary banking business in countries where the banking system is relatively undeveloped, or where other circumstances subject central-bank operations to peculiar difficulties. These special arguments are considered in Chapter 12.

On the question whether the central bank should act as banker to the Government, it has been argued that there is disadvantage in that disturbances in the cash basis of the banking system are apt to arise. On the other hand, there is the argument that the financial arrangements of the Government are of such great importance in influencing the business affairs of the country that it is desirable that the Government should be in constant consultation with the central bankers. The ordinary business man has his bank manager to consult, when he chooses, on the financing of his business. The Government likewise may benefit by having bankers' advice at its disposal, and that advice should be the very best obtainable. The magnitude of the Government's operation makes it desirable that their effect on the central bank's efforts to follow a given monetary policy should be considered.[2] In addition, people who

[1] On the pre-1914 business see my *Bank of England Operations, 1890–1914*, chap. ii.

[2] It is sometimes argued that the central bank must be banker to the State in order that it should know just what movements in government deposits it has to offset; but this argument is fallacious. If the Govern-

favour close State control of central banking see in the daily consultations between the central bank and the Treasury (as banker and client) a rein on the independence of the central bank. These weighty arguments in favour of using the central bank as banker to the Government have prevailed almost universally.[1] It is therefore worth asking how the disadvantage (disturbance of the cash basis) can be averted, or at least modified.

Changes in the Government's balance at the Bank of England are due to inequality between total receipts and total disbursements—capital items and current items all being included. Now it is practically inevitable that expenditure by the Government should be concentrated in particular parts of the year. Dividend payments on great war loans, for example, cannot be spread evenly over every day of the year. It is convenient to make payments for the 'supply services' very unevenly. Revenue from taxation also comes in unevenly: income-tax payments, for example, are still to some extent concentrated in January and July. The nature of government current receipts and payments makes it impossible to arrange for equality between them from day to day and week to week. But if the Treasury can arrange to have capital receipts in excess of capital payments at a time when current expenditure is running ahead of current revenue, the discrepancy on current account does not disturb the balance at the Bank of England. When the British Government borrowed only on long-term paper (consols particularly) it was impossible to make these temporary adjustments in the capital account. But the invention of the short-term Treasury Bill has revolutionized the situation. At the end of the nineteenth century Treasury Bills were in use, but their issues were restricted

ment banks with commercial banks, movements in government balances do not disturb the cash basis, and it is disturbance in the cash basis, not in the distribution of ordinary deposits, that the central bank has to watch.

[1] In the United States a large part of the government balances are held as deposits in the commercial banks.

to supplying funds for particular classes of government expenditure, and it was not until the early years of the present century that they became an unrestricted means of raising funds for the Government.

In the War of 1914–18 the Government, pressed to make the most of every source of funds, increased the amount of Treasury Bills outstanding enormously. Since then their volume has been further increased mainly, no doubt, because it is a cheap way of obtaining funds. All Treasury Bills now have a 'currency' (i.e. life to maturity) of thirteen weeks. They are issued in weekly batches, and as there are[1] £2,900 millions' worth outstanding the weekly issue amounts to some £220 millions. Every week a batch issued three months previously matures, and the payments to the holders occasion a transfer at the Bank of England from Public Accounts to Bankers' Deposits. At the same time a new batch is issued and as the market takes up the new bills there is a transfer from Bankers' Deposits to Public Accounts.

Since 1940 the Treasury has also been able to meet discrepancies between its other receipts and outgoings by manipulating its Treasury Deposit Receipt calls on the banks. Every Friday (after the authorities have received the tender for the next week's Treasury Bills) the Treasury notifies the Bank of England, which in turn notifies the commercial banks, that it requires so many million pounds' worth of Treasury Deposit Receipts to be taken up during the following week. These Treasury Deposit Receipts are shared out between the commercial banks according to a fixed formula, and each bank must during the ensuing week (but on days of its own choice) pay to the Treasury (by transfer at the Bank of England) its share of the sum. The T.D.R.s are repayable by the Treasury after five, six, or seven months—the period being fixed by the Treasury at the time of issue—and each week's maturities of T.D.R.s are of course among the disbursements for

[1] In 1949.

which the Treasury must allow in calculating its cash requirements.

With both Treasury Bills and Treasury Deposit Receipts at hand to manipulate, the Treasury can avoid great disturbance of the market.[1] By arranging the gap between maturities (of the two together) to equal and be in the opposite direction to any discrepancy between current revenue and current expenditure, the Treasury can arrange to keep its balance approximately stable.[2] Similarly, the disturbance which the maturity of a block of medium- or long-term bonds, or a new issue of such bonds, would occasion can be largely prevented by manipulation of the Treasury Bill and T.D.R. issues. The Treasury can also steady its balance at the Bank by buying or selling Treasury Bills in the discount market, though it is probable that constant operation by the Bank of England in the market has caused Treasury operations of this kind to be dropped.

The rise of the Treasury Bill and the Treasury Deposit Receipt has thus enabled the authorities to do much in this country to avert the main disadvantage that arises from the central bank acting as banker to the Government. The Treasury Bill method of government financing has indeed almost come to be considered as an essential adjunct to a central bank structure, and central bankers in the British Dominions have been particularly anxious to develop the Treasury Bill System.

The Treasury Bill is an ideal asset for the central bank to deal in: there is no risk of default, and the shortness of its term implies such a degree of stability in its capital

[1] While T.D.R.s existed in very large volume (i.e. until late 1949) the main brunt of variation was borne by the T.D.R.s; but it is to be expected that in future Treasury Bills will once more be the subject of compensatory variations.

[2] With the growth of social services and nationalized industries the London Money Market has become subject to large but very short-lived disturbance by the concentration of payments—e.g. those of the Milk Board, the Ministry of Health, &c. Early in 1950 there were consultations between the interested parties and some action was taken to iron out the fluctuations somewhat.

value that no conceivable variation in interest rates can make the central bank's operations in Treasury Bills a source of appreciable losses.

We conclude, then, that by the establishment of a Treasury Bill system—a system which has other substantial advantages—the main disadvantage of the central bank's service as banker to the State can be averted. The central bank should therefore be the Government's banker in order to secure the advantage (such as continual consultation on financial affairs) to which we referred above. Ordinary banking business for the general public the central bank should, on the other hand, in general forswear. It is essentially a public, non-profit-seeking institution, and any business likely to embarrass its fundamental operations should not be lightly undertaken.

6

EXTERNAL TRANSACTIONS AND THE BANKING SYSTEM

1. *External Payments and Receipts*

DURING the last four chapters we have largely ignored the outside world and have tacitly assumed that banking transactions are confined to one country. We have assumed that bank deposits are transferred from one person to another, in final settlement of debts, and that the recipients are content to hold the transferred deposits, unless for convenience in making small payments they choose to have 'cash', into which the deposits are readily exchangeable. All this is valid enough if the recipients like the payers are people living and transacting their business all within the confines of one country. In fact many transactions fall beyond these limits. Goods are 'imported' and 'exported'. Travellers move from one country to another, both on business and on holiday, and they find it necessary to make payments in moneys that are 'foreign' to their own—payments that cannot be made by the simple process of drawing on one's bank balance. Shipping overseas brings receipts to the great maritime nations, and occasions payment by others—receipts and payments not in a single currency equally acceptable to debtor and creditor. Other services rendered by the nationals of one country to those of another also occasion external payments—as those made in the shape of film royalties on American films shown to British audiences. Emigrants often want to transfer their personal savings—amounts in one currency—to the currency of the country to which they are going; then in later years they sometimes send financial help back to elderly or youthful relatives left in the home country. International capital movements form

another very large group of these 'external transactions'—an American firm constructing a pipe-line in the Middle East, for example, has to incur a large expenditure in the Middle Eastern country; and an intergovernmental loan, unless required expressly for buying goods in the lending country, also involves ultimate payment to the borrower of money different from that which circulates in the lender's country. Interest charges on and repayment of former foreign loans, and dividends to foreign shareholders in a company, all involve payments to people who will not readily accept either the bank deposits or the cash that circulates in the payer's own country.

The purpose of this chapter is to consider how these 'external transactions' are accommodated by the banking system and how the banking position in a country is affected by them. The very important questions relating to the volume and composition of these transactions, and to their variation from time to time, lie beyond the scope of this book: they may be studied in works devoted to this part of economics, which is called 'the theory of international trade'.[1] Here we simply take it for granted that such transactions are continually arising and that payments have to be made in settlement of them; and we have to consider just how the banking system accommodates these payments. The word 'accommodates' is particularly appropriate, for it is by an extension, a stretching, of the ordinary banking facilities available for internal payments, that a very large proportion of these transactions are conveniently settled. It is possible to imagine two countries with simple metallic monetary systems, between which all trading is settled by payment in a monetary metal (e.g. gold) which could be made up by local mints into the money of the one or the other. Again it is possible to imagine two countries with banking systems entirely

[1] Two important small books on the subject are: P. B. Whale, *International Trade* (Home University Library), and R. F. Harrod, *International Economics* (Cambridge Economic Handbooks).

independent of each other (i.e. not accepting credits with each other), and here also all external transactions would have to be settled by payment in some such medium as gold which could, according to the monetary laws of the two countries, be manufactured into local 'cash'. In either of these cases, there being no 'accommodation' by the banking system, there would be no need for a description of the banking system to take special account of external transactions, since these could affect the banking system only via their effects on the cash position.

The extent to which banking systems accommodate external transactions varies from country to country, according to the strength and diffusion of the overseas ties of its banking system. The overseas ties of the English banking system are stronger and more widely spread than those of any other; and the complexity of the methods of settling its external transactions is therefore extreme. It is this most complex case of the English system that will be outlined here—not described in its full complexity but in its main elements. The reader who has mastered the general principles of the complex English case will have no difficulty in understanding for himself the simpler states of affairs that exist elsewhere.

When an English debtor has to make a payment to an external[1] creditor, he will be required to pay either in sterling (English money) or in foreign money (e.g. by credit in some foreign bank). If payment is made in sterling, the foreign creditor will ordinarily not want to hold the English money (a balance in an ordinary English bank) since his own liabilities are in the main in terms of his own money. The foreign creditor will therefore, in general, *sell* his sterling to his own bank in his own country —this local bank will give him, in exchange for his claim

[1] I use at this point the word 'external' to include both overseas British countries and those ordinarily called 'foreign'. In general it is convenient to use the word 'foreign' in the connotation it has in the term 'foreign trade'—i.e. to *include* overseas British (Dominion, colonial, &c.) territories; and this practice is followed in the remainder of the chapter.

on a London bank, a balance at his home town branch. The Bank of Western Barataria, instead of Mr. English Debtor, will then have a balance of £x with the Westminster Bank in London; and against this increase in its assets, the Bank of Western Barataria will have a new liability, equivalent to £x, in the shape of Mr. Foreign Creditor's deposit balance in Jumbly-Crumbly, a provincial city in the west of Barataria. All that has happened in the English banking system will be that in the Westminster Bank £x of deposits are due to the Western Bank of Barataria instead of being due to Mr. English Debtor. The total purchasing power at the disposal of Englishmen is down by £x; but the total deposit liabilities of the English banks, their cash position, and the position of the Bank of England are all unchanged. If the Bank of Western Barataria has its own office in London, or prefers to bank with some bank other than the Westminster, the Westminster will lose £x in cash and £x in deposits to that other bank; the Bank of England will owe £x less (in Bankers' Deposits) to the Westminster and £x more to the other bank.

Further developments depend upon whether Barataria is inside or outside the *Sterling Area*; and if it is outside the Sterling Area, upon the precise arrangements made by the British monetary authorities with the monetary authorities of Barataria. If Barataria is inside the Sterling Area, the British authorities will not have bothered to inquire into the transaction; but if it is outside, the whole transaction will have been subject to the Foreign Exchange Control whose permission will have been required for the original transaction and who will be very particular as to the precise manner in which payment is made. The difference between the two classes of transactions—those within the Sterling Area and those going outside it—is so great that many people will think only of the latter as 'foreign exchange transactions'. There is, indeed, some sense in this way of looking at it, for the essence of the

Sterling Area is that London acts as banker for the whole of it and English money ('sterling') is freely used for payments from one part of the Area to another (though not for all payments throughout the Area). The closeness of the connexion between the monetary systems of the various parts of the Sterling Area—the banker-and-customer relationship—lies at the root of the Foreign Exchange Control's lack of concern about transactions within the Area; and, if we are to understand the banking situation that makes this possible, we must give the nature of the Sterling Area and its foundation some particular attention.

II. *The Sterling Area*

The Sterling Area is a collection of countries associated not by any formal arrangements nor as the result of any conscious design. Like Topsy it 'just growed'. It is not confined to the British Commonwealth and it has varied in extent. Just now it happens to be almost limited to Commonwealth countries (Canada is outside and South Africa wavers on the brink) though it shows some signs of spreading its tentacles into many other countries, and in the past it has quite clearly included other countries such as Argentina and Denmark. It comprises all those countries *between* which payments are freely made in sterling and which therefore look to London as their banker. The payments are all those passing between the countries—those made by traders and tourists, by bankers themselves (in settlement, for instance, of capital transactions) and occasionally by governments.

Inside a country the usefulness of bank deposits for making payments from one individual to another and the loan facilities offered by bankers cause the development of the banking habit. As the banking habit develops, people get into the way of holding bank balances. In precisely the same way the usefulness of sterling for making international payments causes countries outside Britain to hold London balances—money in London to

be used as a working balance. When I say 'countries . . . hold London balances' I mean not necessarily that Governments hold London balances (this is exceptional) but that banks (especially central banks) whose main business is elsewhere keep balances in London. Among the banks operating in this manner are many established as English companies and having their Head Offices in London. These are the 'international banks' and the 'imperial banks' whose formation became rapid from the eighteen-sixties onwards.[1] They have most, if not all, of their branches overseas, and their principal business is centred in their overseas branches and particularly between their overseas branches and London. While their most profitable assets are their loans and advances to overseas customers, they hold their main reserves of cash and other liquid assets in London.

Other commercial banks have their Head Offices as well as most of their branches overseas, but have branches in London. Some of the Australian banks, for example, are organized in this way while others have their Head Offices in London. Although sometimes the London office is only a branch, it is a very important branch, playing a vital part in facilitating the international transactions of its clients, and holding cash and other liquid assets in London. These London assets are vital to the financing of their international transactions.

In the last thirty years it has become usual for the other countries of the Sterling Area (i.e. countries other than England—the area that official circles have come to label 'R.S.A.'—Rest of the Sterling Area) to have their own central banks. These central banks have generally, for purposes of control in their own countries, taken over from the commercial banks the 'variable' part of the London liquid assets. Working balances in London are still

[1] Mr. A. S. J. Baster has written two useful books about their development—*The Imperial Banks* (London, 1929) and *The International Banks* (London, 1935).

held by the overseas commercial banks; but the London 'reserves' are held by the central banks.

These London balances of the other Sterling Area countries are the international reserves of these countries —their reserves against excesses of external spending over external receipts, just an individual's bank balance is his reserve against a temporary excess of spending over receipts. For reasons that will emerge later the 'R.S.A. countries' do not usually hold any other international reserves. The 'London balances' consist of cash (mainly deposits at the Bank of England, and a small amount of notes, &c., as till money), short loans to discount houses, Treasury Bills, and sometimes other bills that can be readily rediscounted in the London market. A country with large London balances (India, Australia, Egypt,[1] &c., at present) ordinarily has these balances largely concentrated in the ownership of its own central bank, only relatively small 'working balances' being left in the ownership of those commercial banks which have offices or agents in London. Much the greatest part of the central bank's balance is (it is understood) held in the form of Treasury Bills,[2] the remainder being held in the form of an ordinary deposit balance at the Bank of England. The immediate impact of a payment made in London by another country of the Sterling Area is therefore a transfer of cash (balance at the Bank of England) from a commercial bank or central bank of that country to some other bank's account at the Bank of England, but a substantial and continuing net payment to be made in London will occasion a running-down of the central bank's holding of Treasury Bills.

[1] Egypt is now outside the Sterling Area, but in many ways it still behaves as a Sterling Area country. Only the exigencies of Exchange Control have imposed on the Sterling Area a rigid boundary. Even so, some of the old elasticity and indefiniteness remains—notably for South Africa.

[2] Each week the Bank of England, on behalf of these other central banks of the Sterling Area, takes up new Treasury Bills to replace those maturing. These purchases of new Treasury Bills are outside those of the Association referred to in Chapter 3.

The essence of the Sterling Area is thus that London is banker to a large number of other countries. Payments between one part of the Area and another are made by transferring claims in London (just as ordinary private debts are settled by cheque which transfers a claim against a bank). And, for the sake of convenience in meeting variations of payment and receipts, the countries in the Sterling Area hold their working balances in London, just as you and I hold working balances in ordinary bank deposits. Every other feature of the Sterling Area derives from this fundamental point that London is banker to the whole Area.

The foundations upon which this extraordinary phenomenon rests are worth some attention, if we are to understand readily the functions of London as banker to the whole Sterling Area.[1] London's financial position had its roots in London's position as the leading centre of world trade during the nineteenth century, and in London's position as a great and successful international lender. London became an international financial centre because *sterling was always useful* and *sterling was always obtainable*. An ordinary banking account is something that everybody wants because it is always useful and always obtainable. People use banks because they find that cheques on their banks are acceptable to their creditors and because they can always get bank balances by selling goods or services to other people or even by borrowing from the bank. And so it has been historically with sterling as an international currency. In the nineteenth century sterling was always useful—it could be used for buying goods in England, which was the world's greatest market; it could be used for paying interest on English loans; and it could be used for the employment of English ships to carry goods anywhere in the world. Secondly, sterling was always obtain-

[1] The following passage owes much to the stimulating discussion of 'Sterling as an International Currency' by Professor B. Tew in the *Economic Record*, June 1948.

able: it could be obtained by selling goods in England—the English market had a great appetite for the food and raw materials that other countries were producing for export. Also, sterling could be obtained by borrowing in London: a country that wanted more sterling to spend could almost always obtain long-term capital in the London market and, even when long-term loans were temporarily unobtainable, the crisis could be tided over by getting short-term accommodation in London. As the Bank of England came, by fits and starts, to recognize its position as lender of last resort, it became true that money could always be borrowed in London, at a price. This price might occasionally be very high, but at some price sterling was always obtainable, and an expensive short-term loan could be replaced by a cheaper long-term loan as soon as London money-market conditions eased.

London could not have gone on lending to other countries year after year and decade after decade if her position as leader in the Industrial Revolution, followed by the development of cheap food production in the outside world, had not given her an inherently strong balance of payments throughout the period of London's rise as an international financial centre. The hold of sterling as an international currency tightened partly because in those days London could afford to lend abroad.

But it was not merely a matter of being able to lend abroad. There were attractive opportunities in the opening-up (especially by railway and harbour construction) of the great new food and raw material lands of the world. And London went on lending because the borrowers on the whole met their obligations—as they could afford to while England provided such a good market for their produce. As, with the aid of English capital, their production of food and raw materials expanded, their sales in the English and other markets expanded and enabled them to pay their debts.

It is important to realize how well England's potentiali-

ties as an exporter of capital fitted in with the fundamental trading position of the nineteenth-century world. England could produce the goods and the finance that other countries wanted, and England wanted the food and other goods that other countries were being developed to produce. This was the peculiar combination of basic facts that gave strength to London as an international financial centre. At the right time her own monetary institutions were being shaped in a helpful way. Adherence to the gold standard was an important secondary point; but the really fundamental conditions were that, due to the trading and lending position, *sterling was always useful and sterling was always available.*

In the light of these historical foundations, we can now go a little farther into the geographical shaping of the Area and the services that the countries in the Area came to expect London as their banker to provide. The extent of the Sterling Area was determined simply by the dictates of convenience. Sterling had become an international currency, used not only for transactions between England and overseas but also for transactions that never touched England (or even English traders) at all. But although everybody was apt to use sterling, no one was under compulsion to do so—there were no international agreements regulating its use. Consequently, some people used it more than others. Those who used it most were, naturally, those who had the closest business relations with England —those most dependent on England as a source of goods, those most dependent on the English market as an outlet for exports, and especially those wanting to borrow in London and those having sterling obligations to meet as the result of former borrowing. Such were the traders, the bankers, and the governments of the British colonies and Dominions, South America, and to a less extent many other countries. The variation in the closeness of economic relations with England was reflected in a variation in the extent to which they used sterling and held their inter-

national reserves in sterling. One circumstance making for wide extension of the Sterling Area was the fact that throughout the formative period sterling was interchangeable with gold at a fixed rate (i.e. sterling was on a gold standard)—making sterling even more useful, and as sterling balances could earn interest while gold was 'barren', the commercial bankers who were (more often than not) responsible for arranging these matters had an inducement to hold sterling rather than gold for reserve purposes.

Gold was useful because in the last resort it could be used for settling debts outside the Sterling Area. However, it was not only gold that could be obtained in London, but also (and much more usefully) the money of any country in the world. London had the greatest foreign exchange market in the world—any currency could always be bought or sold at the keenest price in London. Consequently, anyone in the Sterling Area having to make a payment to someone outside the Area—to an American exporter, for example—could use a London balance for purchasing in London the foreign currency which the American exporter required. The debtor might be an English importer, who would buy U.S. dollars through his own London bank. Or he might be an Australian importer, who would ask his bank in Australia to obtain dollars: the Australian bank then used some of its London balance to buy U.S. dollars in London. Thus the London Foreign Exchange Market came to cope with the foreign-exchange requirements not only of England but also of all other countries in the Sterling Area.

Correspondingly, a payment received in U.S. dollars (say from an American importer) would be settled in London, no matter where in the Sterling Area the receiver lived. The dollars would be sold in London by the receiver's bank, whether this were an English or an Australian bank, the Bank of Iceland, or any other bank in the Sterling Area. Thus all the foreign-exchange receipts of the Sterling Area came to flow naturally into London, and all foreign-

exchange requirements of the Sterling Area would fall on London and be bought by the use of the London balances of the Sterling Area countries. It follows that what matters most directly to those responsible for London's foreign-exchange reserves is the balance of payments not of England alone but of the Sterling Area as a whole. England may be earning more 'foreign exchange' than she is spending, and yet be losing 'foreign-exchange reserves' because the rest of the Sterling Area has a heavily adverse balance with the outside world. When this is happening, the Sterling Area countries will be drawing heavily on their London balances—the total of English Treasury Bills they own will be falling sharply. Alternatively, English reserves of foreign exchange may be untouched while she has a heavily adverse balance of payments, for the Sterling Area as a whole may be earning as much as it is spending in the outside world. England will then be paying for its adverse balance by adding to its debts to the other Sterling Area countries; the latter will find that their London balances are rising.

The hypothetical case just stated in fact roughly describes what was happening during part of the Second World War. The net needs of the Sterling Area as a whole, for the currencies of outside countries (largely U.S. and Canadian dollars), were being taken care of broadly by the American and Canadian aid programmes and by British sales of securities in the United States, so that the relatively meagre reserves of gold and dollars held by the British authorities were not falling. But the other Sterling Area countries had huge surpluses of earnings and thus accumulated large London balances.[1] These altogether abnormal London balances, which the owning countries want to turn into useful goods (often American goods) as rapidly as possible, have been a source of strain in the Sterling Area ever since the end of the war. Their abnormality originated in the abnormal war-time balances of international pay-

[1] This brief indication of the origin of the 'sterling balances problem' must not be taken as the whole story.

ments, but the mode of accumulation was perfectly normal: the 'sterling balances' grew through the normal functioning of the banking mechanism of the Sterling Area.

Another important present feature of the Sterling Area also grew naturally from London's position as the banker through whom all the foreign exchange transactions flow. This is the 'dollar pool'. London (as banker) holds the gold and dollar reserves for the whole Sterling Area. Countries in the Sterling Area pay dollars, earned by them, into the common pool, and draw from the pool to meet their dollar requirements. This is simply the continuance of old practice. The dollar pool is thus not something foisted on the Sterling Area by a cantankerous London, but something that grew naturally in the course of London's services as banker to the Sterling Area. What is new is the dollar scarcity, and because of this it has been necessary to control the demand for dollars by erecting an exchange control 'fence' not just round England but round the whole Sterling Area. London, as guardian of the dollar reserves of the whole Area, has to ask the other countries to moderate their demands for dollars.

The fact that all the external transactions of Sterling Area countries (including their transactions with each other inside the Area, as well as those with countries outside it) are performed through London gives importance to the question of rates of exchange between the various currencies (Indian rupees, Australian pounds, &c.) and the London pound ('the pound sterling'). The Sterling Area grew up in a world in which there was considerable stability in these rates of exchange, and it is sometimes suggested that there is a necessary fixity in these exchange rates. This is not the case; but there are strong forces making for such rigidity. The closeness of trading relations implies that import and export prices are, to the denizens of the importing and exporting country, likely to have most stability if there is also stability in the exchange rate between England (the principal market) and that

country. Similarly with capital transactions: a country with interest and repayment obligations fixed in sterling will be making difficulties for itself if it drops the rate at which its own currency exchanges for sterling. Again, as for convenience the reserves are in London funds (sterling claims), the reserves maintain fixed values in local currencies only if the exchange rate on London is fixed. So, though there is no absolute fixity, there is a good deal of stability in exchange rates between the various currencies within the Sterling Area, even at times such as the early *nineteen-twenties* and the early *nineteen-thirties* when there was great instability outside the Area.

As for the exchange rates between the Sterling Area countries and the outside world, this is (given the general stability within the Area) essentially a question of the rates between sterling itself and the outside currencies. If the sterling-dollar rate moves, it takes all or most of the Sterling Area currencies with it, because their convenience lies in stability in terms of sterling rather than stability in terms of dollars or other outside currencies.[1] Variations of this kind—variations of the 'master-rate' linking all sterling currencies with those of the outside world—were considerable in the early nineteen-twenties and again in the early nineteen-thirties, and experience then showed that these variations are compatible with the continued existence of the Sterling Area. But such variation does make sterling rather less usable, and this is especially important to countries that also have big transactions with another currency. The outstanding example of the latter countries is Canada, whose close trading and financial connexions with the U.S.A. led her to wobble away from the Sterling Area in the period of sterling instability in the early nine-

[1] In September 1949, for example, all moved together except the Pakistan rupee, which retained its lonely eminence largely because the circumstances of her international trading position at the moment made stability of her prices in terms of U.S. dollars peculiarly attractive. But the consequent rupture of her exchange rate with her immediate Sterling Area neighbour (India) posed some awkward problems for Pakistan.

teen-twenties, and to leave the Area completely in the nineteen-thirties. Variation of sterling rates in important outside currencies is damaging to the 'fringe' countries of the Sterling Area, and therefore tends to narrow its boundaries.

Similarly, lack of convertibility of sterling tends to drive out fringe countries, because it reduces the usefulness of sterling. The clearest case of this is provided by the behaviour of the Argentine in the last twenty years. Through the nineteen-thirties, although the Argentine had growing trade and financial relations with the U.S.A. and although the sterling–dollar rate varied, the Argentine *remained more* or less *within the* Sterling *Area*. But during the nineteen-forties sterling became convertible into dollars only by special arrangements that had to be negotiated between governments, and it became less useful for buying goods from Britain. When the Argentine found that she could use her sterling neither for buying British locomotives nor for buying dollars that could be spent on American locomotives, she decided not to take sterling with her old readiness—that is to say, she left the Sterling Area.

The foreign-exchange troubles of the last three decades have thus tended to narrow the Sterling Area. Just as its early strength was derived from Britain's strong balance of trade and her position as a lender to countries whom she helped to develop into good payers, so the recent chronic weakness of the balance of trade has undermined the foundations of the Sterling Area. First the variability of the exchange rates between sterling and the outside world and then the restriction of sterling's convertibility have encouraged the 'fringe' countries to break away, so that the Area now consists of less than the Commonwealth. But it remains the largest area in the world free from internal payment restrictions. The outliers of London banking bring on to the London money-market the net adjustments of all the external transactions of the countries within the Area; and no account of English banking can be complete

without some reference to the impact on London of these transactions.

III. *A Classification of Transactions outside the Sterling Area*[1]

Besides the many payments and receipts within the Sterling Area, international trading and other economic relations give rise to many payments *across the frontiers* of the Sterling Area: payments by any person inside the Sterling Area to any person outside it, and receipts similarly. These are the transactions that are subject to scrutiny by the Foreign Exchange Control. How do they affect the banking system?

The answer falls into three stages:

1. In relatively small amounts, the transactions may be contained within the English banking system, because the outside payer or payee has an account in a bank inside the Area. Such accounts are subject to the Foreign Exchange Control, and sums may be paid to their credit (if at the expense of other classes of account) only with the consent of the Control, given for precisely the same purposes as are held to justify payments in foreign currencies. These accounts may be regarded as the working balances of outside[2] individuals and corporations. Any pronounced rise in such a balance will therefore ordinarily occasion a demand by the account-holder (the outside creditor) for foreign currency, and this demand is met as a transaction of Stage (2) or (3) below. As long, however, as the outside person merely receives sterling and pays out sterling there may be no more disturbance of the English banking system than that caused by Mr. Smith's cheque in favour of his butcher. All that happens in this case is that the individual ownership of deposits changes, while banking assets can remain

[1] This section makes a broad classification, designed solely for the purpose of elucidating the effect of external transactions *on the internal banking situation*. Other classifications are appropriate for other purposes.

[2] i.e. outside the Sterling Area.

undisturbed. But if (as often happens) the outside account is not with one of the ordinary English banks but with one of the 'outside banks' in London, there will be a shift from *Bankers Deposits* to *Other Accounts* at the Bank of England. This is purely the impact effect, and whether it is a source of further disturbance is a question to be dealt with below, when we shall be considering rather more substantial transfers from *Bankers Deposits* to *Other Accounts*. In general, we may think of changes in these controlled accounts as mere ripples in working balances, causing no disturbance of the English banking situation unless they become substantial, in which case they usually merge into the Stage (2) or Stage (3) transactions to which we must now turn.

2. A very considerable proportion of the transactions across the frontiers of the Sterling Area are those with countries with which the British Government has bilateral *Payments Agreements* that express mutual willingness of the two countries to hold each other's currencies up to more or less sharply defined limits. For example, one such Agreement provides that the Bank of England will sell to the National Bank of Belgium all the sterling required by the latter, in exchange for Belgian francs in the shape of a deposit balance at the National Bank of Belgium, subject to a limit on such balance outstanding at any time; and correspondingly the National Bank of Belgium will sell to the Bank of England francs required by the latter in exchange for a sterling balance credited to the National Bank of Belgium at the Bank of England (under 'Other Accounts'); again subject to a limit on the total sterling balance to be held by the National Bank at any time. Suppose an English importer having to pay Belgian francs to the Belgian supplier requires his bank to sell francs to him—a bank balance in Belgium. The francs are obtained through the Bank of England, which obtains a franc balance at the National Bank in Brussels by crediting the National Bank with the sterling equivalent in its own

books. Correspondingly, an English export to Belgium occasions a demand by the Belgian importer for sterling, which the National Bank can get (a balance at the Bank of England) by crediting the Bank of England with francs in Brussels. If the balance of payments between Belgium and the Sterling Area is running in favour of Belgium (as has usually been the case in the last few years) the Bank of England does not get a chance to accumulate a franc balance in Brussels, but the sterling balance of the National Bank at the Bank of England runs up towards the agreed limit. The Payments Agreement provides (variously in the different Agreements) for settlement of debts *above* the agreed limits by shipment of gold or payment in U.S. dollars. Thus if the National Bank of Belgium's balance in sterling reaches the limit of (say) £27m., and trading transactions take it farther, up to say £29m., the National Bank may demand the shipment of gold to the value of £2m.

Payments Agreements of this general breed have been made with many countries, though the details vary considerably. One of the most important variations is that in some cases the creditor country (the one owning the balance, *not* the one in whose central bank books the resulting deposit stands) has a right to *sell* some of its balance to certain (not any) other countries who happen to be wanting the currency in which it stands. Holland, for example, may have a right (perhaps narrowly circumscribed by conditions) to sell a limited amount of her sterling to Norway. Into the manifold variations of this 'transferability' of balances it is not our purpose to penetrate here; we may confine ourselves to noting that there are such arrangements and that while in general they are intended to ease international trading restrictions, they are usually designed to avoid the running up of balances beyond the 'gold points'[1]—the limits beyond which further claims must be settled by gold.

[1] These modern 'gold points'—the limits of the 'swing' in bilateral Payments Agreements—are quite different from the old-fashioned gold

For our immediate purpose we must notice that payments regulated by such Payments Agreements involve for London, as the English banking centre, three possible events:

(*a*) a change (increase or decrease) in the sterling balance of a foreign central bank, held in the shape of a deposit at the Bank of England;

(*b*) a change (increase or decrease) in the deposit claim which the Bank of England has in a foreign central bank:

(*c*) a movement of gold to or from the English authorities, the limit of the 'swing' in the relevant Payments Agreement having been passed.

Whether the event is (*a*) or (*b*) depends, not upon the nature of the Payments Agreement, but upon which way the balance of previous transactions has been running. Event (*c*) only occurs when the payment falls in the same direction as the previous balance that has risen to the 'gold point'.[1]

Now event (*a*) is precisely parallel to what happens when the entire transaction is internal to the Sterling Area, for then the adjustment is made by changing the ownership of bank deposits in London. In our event (*a*) Mr. English[2] Importer pays over part of his balance in one London bank to the Central Bank of Barataria, which holds its balance at the Bank of England (and privately satisfies Mr. Baratarian Exporter by crediting him with the corresponding sum in his bank account in Jumbly-Crumbly). This is just

points which were foreign-exchange rates at which monetary laws and transport costs made international gold movements profitable.

[1] For example, if heavy French imports from the Sterling Area have not only exhausted any previous French balance at the Bank of England but also forced the Bank of England to accumulate francs (a deposit at the Bank of France) up to the agreed limit, a French payment to England will occasion a gold movement from France to England, but an English payment to France will merely serve to reduce the Bank of England's holding of francs (event (*b*) above).

[2] Or Mr. Australian, or any other Sterling Area Importer.

what happens, directly or indirectly, when Barataria is within the Sterling Area. Our event (*b*), on the other hand, has no parallel in the Sterling Area transactions, because the Bank of England does not hold balances with the central banks of the R.S.A.[1] Event (*c*) again has no parallel inside the Sterling Area, but it is precisely the same as a transaction with a country with which there is no Payments Agreement, or at any rate none providing for mutual holding of more than working balances[2]—and this is the third of the three stages referred to on page 154 above. It is the last kind of transaction that directly involves the operation of the *Exchange Equalization Account*, to which we must presently turn.

Meanwhile let us remark that, looking at the matter solely from the point of view of the internal banking system (and ignoring small changes in working balances) there seem to be three cases to examine:

(1) Redistribution of London Balances. (This case comprises (i) all transactions internal to the Sterling Area and (ii) those of the external transactions covered by Payments Agreements that are indicated by event (*a*) on page 157 above.)

(2) Changes in Bank of England foreign balances (event (*b*) on page 157 above).

(3) Exchange Equalization Account transactions.

It is understood that although in the Payments Agreements the Bank of England appears as principal, it in fact acts as agent for the Exchange Equalization Account when it is operating an account at another Central Bank in pursuance of such an Agreement. Changes in foreign balances

[1] A logical way of putting it is to say that the point at which gold must flow *to* London from a R.S.A. country is one at which the country has in London only a bare working balance. The other gold point (at which gold must begin to flow from London) does not exist for the Sterling Area—'the sky's the limit' (except for Ceylon).

[2] Even the Federal Reserve Bank of New York has a working balance at the Bank of England; and similarly the Bank of England has a working balance in New York.

((2) above) therefore automatically become Exchange Equalization Account transactions, and we have consequently only two cases to examine:

(1) The redistribution of London balances; and (2) Exchange Equalization Account transactions. The remaining sections of this chapter will examine the impact on internal banking conditions of each of these classes.

IV. *The Redistribution of London Balances*

Our first case is a simple one, almost domestic to London. In settlement of debt arising in course of business or pleasure, a transfer has to be made from an account in an ordinary English bank to another bank—a central bank or commercial bank of another Sterling Area country, or a foreign central bank operating under a Payments Agreement. The English bank will have to settle its claim by drawing on its balance at the Bank of England (*Bankers Deposits*) and the receiving bank will, paying the cheque into the account at the Bank of England, find its own deposit there increased (and this comes under *Other Accounts*, whether the bank is a foreigner or a Sterling Area institution). The English bank's liability to its own depositors is down by the sum (say £x)—the depositor having been charged the amount of the transfer made in London on his behalf. Thus the English bank's deposit liabilities are down by £x and its 'cash' (its share of Bankers' Deposits at the Bank of England) is down also by £x. Correspondingly the outside bank has its London funds (the part that is its share of Other Accounts at the Bank of England) up by £x, and its deposit liabilities to its own customers in Barataria are also up by £x.

In the English bank the equal absolute fall in cash and deposits will have reduced the cash ratio. This movement is infinitesimal for a single transaction; but if payments are on balance running strongly this way (i.e. against England) the fall will become appreciable. Then the English banks will rebuild the cash ratio by calling in loans from the

discount market and by not replacing Treasury Bills as they mature. (Their deposits will *not* be rebuilt, and it will be unnecessary for them to add as much to their cash as they originally lost.) Where will the cash be found? The chances are that the outside banks, whose balances at the Bank of England are running up as the others run down, will be willing (indeed anxious, because of the interest to be earned) to lend more in the discount market and to take up more Treasury Bills. The chances are that the 'cash' let out into the discount market (by loan and by taking up bills) by the outside banks will more or less equal the amount that the English banks are seeking to absorb. So the balances at the Bank of England move back from Other Accounts to Bankers' Deposits. To the extent that they do not, the Bank of England will have to consider whether it should, by itself taking up more (or less) Treasury Bills, bring back the English banks' cash to their conventional 8 per cent. ratio to their new (lower) level of deposits.

Assuming that no such adjustment by the Bank of England is called for, what is the final upshot for the banking position in London (neglecting Barataria)?

(*a*) English bank deposits are down, by the full amount of the transfer;

(*b*) English bank cash is down, by 8 per cent. of the transfer (so maintaining the 8 per cent. cash ratio);

(*c*) other Accounts at the Bank of England are up by 8 per cent. of the transfer (standing to the credit of the Bank of Barataria);

(*d*) a sum of Treasury Bills and Money at Call in the discount market, together amounting to 92 per cent. of the transfer, will have become the property of the Bank of Barataria.

The U.K. Treasury will have found no new difficulty or ease in placing Treasury Bills, but the distribution of ownership of these Bills will have changed in favour of Barataria, and to the loss of Englishmen. Similarly, the

Bank of England will have had to engage in no operations to doctor the state of the money market, and there is every reason to suppose that rates of interest will be undisturbed. Englishmen individually own less (total bank deposits in England are down) and this decline in individual property is reflected in the fact that ownership of some Treasury Bills (or of claims against the discount houses that are thereby enabled to hold Treasury Bills) has passed to Barataria. This loss of English property is, of course, the price paid for the excess of imports (or perhaps holidays abroad) that occasioned the excess of payments by Englishmen to Baratarians.

The transfer of claims in London—the transfer of ownership of 'cash' at the Bank of England—does not cause any disturbance of interest rates because we have supposed the foreign banks to be as willing as were the English banks to hold the 'money market assets' rather than idle cash. If there is not this equality, open market operations by the Bank of England (the automatic operations of the ever open back door) will make compensating adjustment. In effect, the Bank of England will take up any Treasury Bills released by the English banks but not taken up by the outside banks, or it will release any Treasury Bills to match excessive appetites of the outside banks[1]—whichever is necessary to maintain the short-term money market undisturbed at its chosen interest rate.

If a movement of the kind we are considering is large and prolonged, account will have to be taken of two other points. First, as the transfers take place, the English banks' proportion of money market assets will fall, because they replenish their cash by reducing their assets (the fall in money market assets will equal 92 per cent. of the fall in deposits). As things are at present, with the English banks holding quite unusually high proportions of Treasury Bills,

[1] The latter event will occur if the outside banks like a larger ratio of $\frac{\text{money market assets}}{\text{cash at the Bank of England}}$ than that favoured by the English banks.

&c., this development would not worry them; but conditions are conceivable in which they would feel short of such assets and would be driven to sell longer-term government securities, so causing a general rise in interest rates. Secondly, whether the banks are thus driven into a feeling of illiquidity or not, the general public is likely to be so, for the total of bank deposits—people's money balances—goes down by the whole amount of the net transfers to Barataria. Their immediate reaction is to sell the most liquid other assets they have—government securities—so driving their prices down. The demand for more liquidity, that is to say, forces interest rates up. If the Bank of England wants to prevent this from happening, it must keep the commercial banks plied with cash in sufficient amounts to induce them to take up the securities that the public is inclined to sell. Mere keeping of the back door open with ready cash for Treasury Bills at the $\frac{1}{2}$ per cent. rate will not be enough for this purpose, if the public is inclined to sell other—longer-term—*government securities*. To meet this situation the authorities must be prepared (by means to be elucidated in Chapter 8 below) to absorb, directly or indirectly, securities of the maturities that are being unloaded by the public.

One curious implication of this analysis is that if any other force is at work in the system, tending to enlarge the supply of bank deposits, the 'new' deposits so created will replace those that have been in effect transferred into the outliers of the system (i.e. to the ownership of the outside banks in London); and the immediate recipients of the new deposits will in effect be financed by the Sterling Area or 'Payment Agreement' countries that are leaving part of their export proceeds uncollected from London. One such force tending to enlarge the supply of bank deposits is a government deficit.[1] An adverse balance of payments of

[1] In the sense of an excess of government disbursements over receipts—account being taken of transactions 'below' as well as 'above the line' in the Exchequer accounts.

Britain, with such countries as will use the proceeds to enlarge (by say £400m. in a year) their London balances, may precisely offset, in effects on the internal banking situation, a government deficit of £400m. in a year. The mechanism by which this double movement can occur without any disturbance can most clearly be seen if we suppose that the outside banks are adding the £400m., in regular amounts of £8m. a week, to their holdings of Treasury Bills secured through the weekly tender, and that the Government simultaneously is financing its deficit by adding £8m. to the total of Treasury Bills issued each week. Then during each week the outside banks will find their balances at the Bank of England running up by £8m., as the English banks pay that amount to them on account of their depositors (Bankers' Deposits at the Bank of England will be going down by £8m., and the deposit liabilities of the English banks also go down by £8m.). At the same time the Treasury will be drawing on Public Accounts at the Bank of England, to a net amount of £8m. (its deficit for the week), and this sum will go to the ordinary banks whose cash at the Bank of England (Bankers' Deposits) and deposit liabilities to customers will each be going up by the £8m. Public Accounts at the Bank of England (the Treasury's balance) will meanwhile be being replenished by the payments by the outside banks for the additional Treasury Bills. These payments will precisely offset the drawing-down by £8m. of Public Accounts (government deficit) and the rise in Other Accounts (receipts of Outside banks) at the Bank of England.

At the end of fifty such weeks the cash and deposit position, and indeed entire balance-sheet position, of the English banks will be precisely as at the beginning. The Bank of England's balance sheet will also look the same. What will be new will be that the Treasury will owe on Treasury Bills £400m. more than before to the outside banks. The outside banks will find their London balances (that part which is held in Treasury Bills) up by £400m.

CHART OF WEEKLY BALANCE-SHEET CHANGES

LIABILITIES				*Net changes*	*ASSETS*			*Net changes*
(1) *Bank of England*					(2) *Bank of England*			
Public Accounts	−8 Ba(3)		+8 Cb(6)	Nil				Nil
Bankers' Deposits	−8 Ab(4)	+8 Bb(4)		Nil				
Other Accounts	+8 Ac(6)		−8 Ca(6)	Nil				
(3) *English Banks*					(4) *English Banks*			
Deposits	−8 Aa(5)	+8 Ba(1)		Nil	Cash at the Bank of England	−8 Ab(1)	+8 Bb(1)	Nil
(5) *Outside Banks*					(6) *Outside Banks*			
Liabilities to Depositors in other Countries	+8 Aa(3)			+8 D(6)	Cash at the Bank of England	+8 Ac(1)	−8 Ca(1)	Nil
					Treasury Bills	+8 Cb(1)		+8 D(5)

CHART NOTES

In the Chart, only changing assets and liabilities are shown. All those not shown are unchanged by *the transactions* referred to in the text.

Left-hand sections of the Chart (1, 3, and 5) show liabilities; right-hand sections (2, 4, and 6) show assets. Every change in assets anywhere in the Chart must have its counterpart *either* in the same direction (signs matching) on the liabilities side; *or* in the opposite direction (signs contrasting) on the assets side. *Similarly, a change* in liabilities must have its counterpart *either* in a change in the same direction (signs matching) on the assets side *or* in the opposite *direction* (*signs* contrasting) on the liabilities side.

For each transaction a lettering and *numbering are* given. Each lettering (e.g. Aa) appears twice—once for each counterpart, and the number in brackets after it indicates the section of the Chart in which its counterpart appears (e.g. Aa(3) and Aa(5) are to be found in Sections (5) and (3), and both being on the *same side* (liabilities) their signs must be contrasting—Aa(3) is + and is in Section (5), then looking in the indicated Section (3) for *its counterpart, we find* that Aa(5) is −).

A transactions are those arising from the balance of overseas payments.

B transactions are those arising as the Government overspends.

C transactions are those arising from the purchase of additional Treasury Bills by the Outside banks.

D shows a net change.

English firms draw cheques on their bank deposits Aa(5) and *these are* credited to their foreign suppliers in their own countries Aa(3); the Outside banks present these cheques to the English banks, which settle by drawing cheques on their own balances at the Bank of England Ab(4) and Ab(1); the Outside banks pay *the cheques* into *their* accounts at the Bank of England Ac(6) and Ac(1).

Meanwhile the Treasury is overspending; its drafts on Public Accounts Ba(3) find their way into the hands of English creditors, who pay them into their own bank *accounts Ba(1)*. The English banks present these drafts for payment at the Bank of England, which settles for the Treasury (which we have supposed already charged in Public Accounts) by adding £8m. to Bankers' Deposits Bb(4) so that the English banks show in their balance-sheets £m8 more cash at the Bank of England Bb(1).

At the same time the Outside banks are taking up additional *Treasury* Bills (we are supposing that they are taking them directly at the weekly tender). They pay by cheques drawn on their accounts at the *Bank of England* Ca(6) and their 'cash at Bank' is therefore down Ca(1); the Bank of England credits the £8m. to the Public Account Cb(6) and *the Treasury hands the* bills to the Outside banks Cb(1).

The net upshot is that there is no change at the Bank of England, no change in the English banks, and in the Outside banks an increase in their Treasury Bills D(5) and a corresponding *increase* in their deposit liabilities D(6) in Ruritania, &c. Englishmen and English banks have suffered no loss of assets or increase *in liabilities*; but corporately (in the shape of H.M. Treasury) they owe a new £8m. to foreigners, and this debt is recorded in the *additional Treasury Bills held* by the Outside banks.

The 'sterling balances' of outside countries will be up by £400m. The countries willing to hold more sterling will have paid for the excess disbursements of the British Treasury. British people will have had the benefit of a net supply of goods or services from the other countries, to the value of £400m., and still be individually rich as before —their bank balances and other assets remaining unchanged; but corporately (through H.M. Treasury) they will have incurred the debt represented by the £400m. of additional Treasury Bills now held by the overseas banks. Thus we see how the accumulation during the war of the 'Sterling Balances' (whose existence is now an embarrassment to the U.K.) was, to the tune of hundreds of millions, the counterpart of the U.K. government deficit. By the issue of Treasury Bills to outside banks, whose claims on Britain were being swollen by British imports from, and British military disbursements in other countries, part of the government deficit was being financed without any strain on the English banking system.

If the outside banks wanted to hold some (say £50m.) of their extra £400m. of London Balances in 'cash at the Bank of England', the Bank of England would have to enlarge its own holding of Treasury Bills by £50m., so allowing 'Other Accounts' to rise by £50m. without any reduction in Bankers' Deposits. The £400m. of new English debts would then take the shape of £350m. additional Treasury debt to the outside banks, and an extra £50m. owing by the Bank of England (i.e. standing in 'Other Accounts' where the balances of these outside banks appear) to the outside banks. The Bank of England would have a new claim of £50m. (on Treasury Bills) against the Treasury to offset its additional liability to the outside banks.

If the outside banks want to hold some (say £100m.) of the extra balances in the shape of Money at Call in the discount market, the discount houses will thereby be enabled to hold £100m. of the additional Treasury Bills, which together with the £300m. taken by the outside banks

will exactly cover the total £400m. of government deficit; and there will be no disturbance of the English banks.

It is not only an excess of *government* disbursements that can be financed by additions to London balances of outside banks. If private business is spending more on new capital equipment and material stocks than can be financed by new savings, the money for making the excess payments can be obtained by business people in the shape of advances from the banks or as the proceeds of sales of securities to the banks. The latter can provide the additional advances or buy the securities[1] by letting their Treasury Bills run down, while the displaced Treasury Bills are absorbed by the outside banks. The 'new saving' required to back the additions to real investment in British industry will then have been done by the outside countries who leave their new claims in London uncollected.

Adepts in 'National Income arithmetic' will be able to construct all sorts of imaginary situations in which the rising London funds of outside banks finance various developments. The important point to notice here is that the English banking situation will be undisturbed only if somebody is releasing just those classes of assets which the outside banks are willing to hold. In our examples above these have been (1) Treasury Bills released by the Treasury; (2) a combination of (1) and additions to Other Accounts at the Bank of England: (3) a combination of (1) and additions to Money at Call in the discount market; (4) release of Treasury Bills by the English banks. Case (2) requires some action by the Bank of England; (3) requires a willingness in the discount market to use more Money at Call for holding Treasury Bills; and (4) requires a willingness of the English banks to let their Treasury Bills run down while their Advances and Securities run up. In extreme cases (4) and even (3) will only be achieved at the expense of some strain on the interest rate structure; and Bank of

[1] On condition that they are prepared to see a change in the liquidity distribution of their assets.

England action—pumping additional cash into the system—may be necessary if disturbances of the interest rate structure and of the willingness of banks to lend are to be avoided.

In the above paragraphs we have been considering what happens when, as a result of the international payments system, London balances of outside countries are increasing. For the reverse case—an excess of transfers from overseas banks to English banks in London—the entire argument can be reversed. The impact effect will be an addition to cash and then to the money market assets of the English banks, and to their deposit liabilities. Both English banks and English depositors will, in course of time, feel that their liquidity is unnecessarily high, and there will be a tendency for interest rates to fall. This tendency can be held in check only if the monetary authorities are prepared to release (in exchange for money) securities of the kinds that the public and the commercial banks would like to hold instead of the highly liquid assets with which they feel gorged.

This creation of a position of excess liquidity can, in ways analogous to those discussed in the opposite case, be nullified by a government surplus or by an excess of private savings over private spending on capital. Similarly, it can be aggravated by a simultaneous government deficit, or by an excess of private business spending on capital account.

The upshot is that the balance of payments between Britain and those countries which, because they are in the Sterling Area or through the operations of Payments Agreements, hold London balances beyond purely working balances, is one of the factors determining the English banking situation; and therefore this balance of payments calls for close watching by the central bankers whose business it is to diagnose the situation and to mete out any appropriate treatment to the domestic banking system.

v. *Exchange Equalization Account Transactions*

We have now to consider the remaining transactions—the second of the two classes specified at the very end of Section III above. These are all transactions involving appreciable net payments to (or receipts from) countries that refuse to hold further English balances. These countries are by definition outside the Sterling Area, for Sterling Area countries are willing to enlarge their London balances automatically. They may be 'Payments Agreements countries', in either of two positions. *Either* the previous balance of payments has been such as to push their sterling balance up to the limit provided for in the Agreement (i.e. up to the gold point) *or* the previous balance of payments has led to a balance in England's favour standing in the books of the foreign central bank. In the former case the Exchange Equalization Account will be called upon to sell gold or other foreign currency to cover any further English payments. In the latter case the Exchange Account will provide for new English payments by selling to the English debtors part of its balance held in the foreign central bank. Alternatively, the countries concerned may be countries with which there is no Payments Agreement at all, in which case any net payments must be met by a sale by the Exchange Account to English debtors' of the foreign currencies required. Thus in all these cases the Exchange Account has to sell foreign currencies. To meet such demands the Exchange Account holds a reserve of certain foreign currencies—among them balances in those central banks with which Payments Agreements operate; and it also holds gold, which can be readily exchanged for U.S. dollars and for any other currencies required, under the monetary laws of the United States and other countries. The Exchange Account has, of course, to take advantage of the opportunities afforded by balances favourable to England, to replenish its stocks of gold and foreign currencies.

This Exchange Equalization Account is a sub-department of the Treasury, all its operations being conducted by the Bank of England as agent for the Treasury. Its accounts are not published at all.[1] Its original purpose was, in an uncontrolled foreign-exchange market, to buy and sell sterling in such a way as to steady movements in the value of sterling in terms of the leading foreign currencies.[2] With war and post-war foreign exchange restrictions and the policy during the war, and since the war under the International Monetary Fund arrangements[3] of maintaining a fixed exchange rate between sterling and the U.S.A. dollar, the original purpose of the Account has disappeared. Instead it now serves to absorb the excess demand or supply of foreign currencies at the fixed rate (which until September 1949 was \$4.02 = £1, and has since then been \$2.80 = £1). From the point of view of its technical operations and the impact of these on the banking system there has been no change. Before 1939 the Account in effect chose each day a rate of exchange not much different from that of the day before[4] and absorbed the excess demand for or excess supply of foreign currency at the chosen rate; whereas nowadays the rate is generally held fixed (being alterable only under I.M.F. arrangements) and, whatever that fixed rate is, the Account has to absorb all the excess supply of or demand for foreign currency.[5]

[1] The desirability of secrecy was one of the main reasons for its original separation from the Bank of England. Subsequently it became possible to deduce from various published figures much information about the Account's transactions over considerable periods, and other reasons for the original separation from the Bank of England disappeared when the latter was nationalized in 1946, but the arrangements have not been altered. In France changing circumstances have led to the French Equalization Account's being first a part of the Treasury, then a part of the Bank of France, and then in 1949 once more a part of the Bank of France.

[2] For an account of its purposes and conduct in the nineteen-thirties see earlier editions of this book, Chapter 8, Sections II and III.

[3] See Appendix I.

[4] *Sometimes over considerable periods, no different at all.*

[5] An important difference, not relevant to our present purpose, is that

How does the Exchange Equalization Account 'absorb' the excesses of demand and supply? In answering this question it will be simplest to think of the Exchange Account as operating only in U.S. dollars and gold. These are interchangeable with each other at a fixed price by the monetary arrangements of the U.S.A., and the gold or dollars can always be used to purchase any other foreign currencies required. Other foreign currencies are not necessarily always convertible at fixed prices into gold or dollars, but the Account will avoid accumulating undue balances of these inconvertible currencies by warning the Foreign Exchange Control that more Sterling Area imports from the relevant countries may be allowed and (perhaps) that exports thereto should be discouraged. We shall therefore ignore these 'working balance' transactions in other currencies, and simply consider the impact of a demand for or a supply of gold or U.S. dollars. This simplification allows yet further simplification in our arithmetic, for the price of gold in terms of dollars is always fixed[1] and we can therefore talk of the gold as the appropriate amount of U.S. dollars. The 'absorption' of the excess supply of, or demand for, dollars is achieved by release of Treasury Bills in exchange for dollars or dollars in exchange for Treasury Bills. The Account can always perform the operation because it can always provide Treasury Bills (it can always, as a part of the Treasury, write out I O U s) and it always has dollars. It took over previous dollar reserves from the Bank of England and these have never been exhausted because the Americans have given and lent us much, and the Sterling Area has earned as much as it could in dollars and has restrained its dollar expenditure by Exchange Control and other arrangements.

nowadays the demand for foreign currency is held in check by the Foreign Exchange Control, whereas in the thirties it was determined by free market behaviour.

[1] Under U.S. monetary law it is alterable only by the President with the consent of Congress. No change has been made since 1934, and no change is now (1950) in sight.

Turning now to the impact of the Account's transactions on the English banking system, let us once more begin by assuming that English people have an excess of payments to make to countries that claim dollars or gold. Then they through their banks and the latter through the Bank of England buy dollars from the Account. The Account receives English bank deposits in the shape of a transfer from Bankers' Deposits to Public Accounts at the Bank of England. The Account proceeds to use its balance at the Bank of England to buy Treasury Bills in the market, and this gives the English banks the chance to rebuild their cash ratios at the expense of their Money Market Assets. Putting these steps into our usual schematic form we have:

POSITION I

Bank of England

Bankers' Deposits + Note Liabilities to Commercial Banks	80	Government Securities (Treasury Bills)	180
Public Accounts	100		
	180		180

Commercial Banks

Deposits	1,000	Cash in hand and at the Bank of England	80
		Money Market Assets	200
		Other Assets	720
	1,000		1,000

Cash ratio 8 per cent. Money Market Assets ratio 20 per cent.

POSITION II

(After the public has paid 40 for the required dollars, and the Bank of England has charged their cheques to Bankers' Deposits and credited the proceeds to the Exchange Equalization Account under 'Public Accounts'.)

Bank of England

Bankers' Deposits + Note Liabilities to Commercial Banks	40	Government Securities	180
Public Accounts (incl. 40 for E.E. Account)	140		
	180		180

Commercial Banks

Deposits	960	Cash in hand and at the Bank of England	40
		Money Market Assets	200
		Other Assets	720
	960		960

Cash ratio 4 per cent. (approx.).
Money Market Assets ratio 21 per cent. (approx.).

POSITION III

(After the commercial banks have rebuilt their cash ratio to 8 per cent., by unloading Money Market Assets on to the Bank of England, but before the Exchange Equalization Account has used its balance.)

Bank of England

Bankers' Deposits + Note Liabilities to Commercial Banks	77	Government Securities (180+37 taken from market through the back door)	217
Public Accounts	140		
	217		217

Commercial banks

Deposits	960	Cash	77
		Money Market Assets	163
		Other Assets	720
	960		960

Cash ratio 8 per cent.
Money Market Assets ratio about 17 per cent.

Then the Exchange Equalization Account proceeds to use its balance to buy Treasury Bills in the market. The discount houses and the banks together have no desire to sell Treasury Bills—in fact the banks have rather less money market assets than they would like to have if their cash position were a little easier. Then to prevent the competition for Treasury Bills from forcing the discount rate below the conventional ½ per cent., the Treasury Bills are made available in effect by the Bank of England. The latter reduces its holding of Treasury Bills, charging the unloaded bills against Public Accounts. So we have:

POSITION IV

Bank of England

Bankers' Deposits, &c.	77	Government Securities	177
Public Accounts	100		
	177		177

Commercial Banks as in Position III

The transition from Position III to Position IV is likely to be made quite unobtrusively, without any intermediary strain on the discount market, by an increase of 'tap' issues of Treasury Bills to the Exchange Account countered by an equal decrease in tap issues to the Bank of England—or even by direct transfer of bills from the Bank to the Exchange Account.

Position IV is, we should emphasize, the position reached by the automatic working of the system under present circumstances. Given the ever open back door at the Bank of England and the Exchange Equalization Account's habit of using the proceeds of foreign currency sales to buy Treasury Bills, the commercial banks can maintain their cash ratio without forcing any further contraction of the supply of money. But in Position IV there remain two significant differences from Position I: the public's deposits at the commercial banks are down by 40, and the commercial banks' Money Market Assets ratio is down from 20 to 17 per cent. The public and the commercial banks will therefore both be a little less liquid than before, and if these changes are at all pronounced there will be (as in the parallel cases in the previous section of this chapter) a tendency for interest rates (other than the pegged short rates) to rise. To prevent this rise the Bank of England will have to buy securities, so adding to the cash reserves of the commercial banks and inducing them to expand their earning assets and their deposit liabilities to the public. But this further action of the Bank of England will *not* come about in course of the automatic operation of the open back door.

As in the case discussed in the previous Section, this

deflationary effect of an adverse balance can be offset by a simultaneous inflationary factor such as a government deficit. Again, if the excess demand for foreign currency originates not in England's balance of payments but in that of the Rest of the Sterling Area, the banks of the R.S.A. will find the 'cash at the Bank of England' for paying for the foreign currency by selling Treasury Bills, and these Treasury Bills will be taken up by the Exchange Equalization Account. There will in this case be no strain at all on the English banking system and no residual deflationary effect in England (though there will be in the R.S.A.).

In the reverse case—an excess supply of foreign currency in English hands—the English people sell the foreign currency through their banks to the Exchange Equalization Account, which obtains the English cash required in exchange by selling Treasury Bills. Taking as the starting-point Position I as on p. 172 above, and supposing the excess supply of foreign currency to be absorbed by the Exchange Account as 40, we shall have, corresponding to Position IV in the opposite case:

POSITION IV A

Bank of England

Bankers' Deposits, &c.	83	Government Securities	183
Public Accounts	100		
	183		183

Commercial Banks

Deposits	1,040	Cash	83
		Money Market Assets	237
		Other Assets	720
	1,040		1,040

Cash ratio 8 per cent.
Money Market Assets ratio 23 per cent.

In this Position IV A, the banks have got their cash ratio right, but they will feel that their Money Market Assets

ratio is rather high. They will be inclined to unload some Treasury Bills on to the Bank of England, using the proceeds for buying more remunerative though longer-term securities. Similarly, the public, with the supply of money up from 1,000 to 1,040, will feel unnecessarily well supplied with money balances and will tend to demand more securities. Thus the pressure of excess liquidity both in the banks and among the public will tend to drive down the rate of interest. No automatic action of the authorities will prevent this inflationary factor from appearing, though simultaneous deflationary factors (a government surplus, or an excess of private saving over private investment) will neutralize it if they happen to be present.

VI. *The Impact of 'Marshall Aid' Dollars*

Under the generous provisions made by the United States in 1947–8, a very large sum in dollars is now being made available (partly on loan, but mostly by gift) to the nations of western Europe, including Britain, to tide over a period of very adverse balance of trade between Europe and the dollar area. This might be supposed to raise no new problems of analysis for us, as the dollars for England might be supposed simply added to those held by the Exchange Equalization Account. But in fact the requirement of the American legislation, embodied in the formal agreement between the governments of the United States and the United Kingdom, necessitates an accounting arrangement that brings the transactions into the books of the Bank of England.[1]

The dollars provided are balances in New York (in the Federal Reserve Bank) and these dollars are sold by the U.K. Treasury (through the Bank of England) to English importers (whether official or private). The English cash

[1] The U.S.A. requirements look, at first glance, unnecessarily fussy; but it was obviously right that the arrangements made with Britain should be broadly in line with those made with the other aided countries, and the Americans rightly attached great importance to the use of their Aid for promoting internal financial stability.

paid in by the English recipients of the goods goes (as transfer from Bankers' Deposits)[1] to a Treasury Special Account at the Bank of England.[2] The Treasury at the same time borrows from the Bank of England an equal sum on special interest-free Treasury Notes, in replacement of ordinary Treasury Bills. These Treasury Notes are simply a particular variety of Treasury Bills, and are entered in the Bank Return under Government Securities. When the American authorities 'release' the balance in the special Treasury Account (the suspense account) they usually do it for the reduction of the U.K. Treasury's internal debt, and this requirement is satisfied by the cancellation of the Special Treasury Notes held by the Bank of England.

The utilization of Marshall Aid dollars, to the sterling amount 40, may be set out in our usual way, with the impact on the commercial banks being precisely the same as it is after the utilization of dollars previously held by the Exchange Equalization Account (pp. 172–5 above). In the Marshall Aid case the Exchange Account's position is unchanged, but the figures shown for the Bank of England will undergo a somewhat artificial contortion. For the Bank of England, we may take as

POSITION I

Deposit and Note Liabilities to Commercial Banks	80	Government Securities (including nil for Special Treasury Notes)	180
Public Accounts	100		
Special Treasury Account	nil		
	180		180

The Marshall Aid dollars made available in New York by the U.S. Administration are sold by the U.K. Treasury to English importers, and at the same time the Treasury issues to the Bank of England Special Treasury Notes (40)

[1] I am simplifying by ignoring the possibility that the imports are on government account (e.g. by the Ministry of Food), for then the transfer is a prolonged one and passes via Public Accounts. The upshot is the same.

[2] See the Bank Return, p. 85 above.

and takes in exchange Treasury Bills (which it cancels). So we arrive at the Bank of England's

POSITION II

Deposit and Note Liabilities to Commercial Banks	40(*a*)	Government Securities (including 40 for Special Treasury Notes) . .	180
Public Accounts . .	100		
Special Treasury Account	40(*b*)		
	180		180

Note:—The fall in (*a*) is the counterpart of the rise at (*b*).

Then the Americans 'release' the 40 in suspense in the Special Treasury Account, requiring it all to be used for reduction of debt. So we get

POSITION III

Deposit and Note Liabilities to Commercial Banks .	40	Government Securities	140
Public Accounts . .	100		
Special Treasury Account .	nil		
	140		140

The redemption of internal debt has now taken place in the form agreed by the Americans; but it may be noted that in fact the net internal debt of the U.K. Treasury went down when it cancelled 40 of the Treasury Bills at the first stage: the new Special Notes being offset by the new credit balance under the special item on the other side of the Account.[1]

It will also be appreciated that it is from the Position III just described that we have to begin consideration of the adjustment of the commercial banks' cash position (as in

[1] The U.S. Administration has the right to require part of the balance in the Special Treasury Account to be used for certain specified purposes other than debt redemption. In the case of expenditure on supplies to U.S. authorities in England, the U.K. Government in effect itself finances this expenditure by re-issuing to the Bank of England Treasury Bills in exchange for those Special Treasury Notes which now cannot be redeemed by use of the Treasury Special Account.

Positions III and IV on pp. 173, 174 above). The effect on the English banking situation of an adverse balance of trade financed by Marshall Aid dollars is therefore precisely the same as that of an adverse balance caused by release of dollars by the Exchange Equalization Account. The initial shrinkage of the Bank of England's holding of Treasury Bills (replaced temporarily by Special Notes) will eventually be largely offset by the pressure on the commercial banks to rebuild their cash ratios by unloading Money Market Assets, and this part of the operation will go through smoothly, thanks to the Bank of England's ever open back door. But there will remain a slight deflationary element in the situation, due to the decline (by the amount of Marshall Aid) in the supply of money and to the lowered Money Market Assets ratio of the commercial banks.

VII. *Conclusion*

Our analysis of the various cases has led us to the conclusion that the impact of external transactions on the domestic banking system will vary according to a number of factors; but also to the very general conclusion that an adverse balance of English payments will set up slightly deflationary forces, and correspondingly a favourable balance will set up slightly inflationary forces. These deflationary or inflationary forces will be much weaker than they were when there was no Exchange Equalization Account and, especially, when there was no 'ever open back door' at the Bank of England. These two innovations since 1931 now perform automatically *most* of the neutralizing work required to insulate the domestic banking system from the international balance of payments—the kind of neutralizing work that used to be undertaken sometimes in a deliberate and non-automatic way by central banks in their open-market operations in gold standard days. But it must be remembered that the precise way in which transactions will be caused to operate on the Bank of England's

back-door machine will vary from case to case, and the authorities will do exceedingly well if they always diagnose the current situation correctly.[1] Moreover, the insulation provided by these automatic machines is not complete—there remains some inflationary or deflationary force[2] and it is for the authorities to consider, in the light of other circumstances, whether they want this residual force to work unimpeded or whether they ought by deliberate action to neutralize it. Why the authorities should bother their heads about the disturbance of the interest-rate structure, why, indeed, we say they are 'inflationary' or 'deflationary', are questions we must seek to answer in Chapter 7. As to what has happened in recent years in Britain, the position over most years has been that the deflationary force of the adverse balance of trade has been rather more than offset by the inflationary forces set up by government deficits and the excess of private capital expenditure over private saving. The only important departure from this position was in 1946–7, when the authorities engineered an excess of inflationary pressure that went far beyond offsetting the deflationary pressure of the adverse balance of trade. The reader who survives as far as Chapter 8 will find there some discussion of this unusual episode.

[1] It is important to remember that for purposes of practical policy the diagnosis has to be made while a change is proceeding, and cannot wait upon the appearance of a comprehensive statistical record.

[2] The difference in this respect between the present system and a gold-standard system is perhaps worth a moment's thought. In the present system a loss of reserves is reflected in an exactly equal contraction in the total of bank deposits, and the authorities provide exactly the amount of cash required to support the total of deposits, whatever that may be. In the 'automatic' gold-standard system, the loss of reserves is reflected in an exactly equal contraction of deposits *and* an exactly equal (*not* a proportionate) contraction of the cash base; the need to re-establish the cash ratio then called for a further (and multiple) contraction of deposits.

7

THE RATE OF INTEREST, THE SUPPLY OF LOANABLE FUNDS, AND ECONOMIC ACTIVITY

1. *Short-term Rates of Interest and the Holding of Goods*

BANKERS sometimes allege that they are powerless to influence the volume of economic activity, and that they merely sit in their offices and welcome the opportunity to provide temporary financial help for any sound business that comes along. But though the individual banker may feel that his role is essentially a passive one, the banking system as a whole (including the central bank) does through devious channels have an important influence on the tempo of economic activity, and it is the purpose of the present chapter to analyse and evaluate these devious channels.

The tempo of business activity depends upon the readiness and ability of the business men to employ real resources in the processes of production, and it is through its influence upon both the business man's readiness and his ability to set resources to work that the banking system operates on the level of activity. It is important to remember throughout the following paragraphs that the business man is influenced also by many factors not in the least under the bankers' control, and we shall have to consider carefully how the banking factors compare with others in weight. But whether the non-monetary factors are powerful or weak, it is generally agreed that the banking factors (the monetary factors) have *some* share in the determination of the business men's course and therefore in the determination of employment, prices, and income. The banking situation influences the business man in any or all of three ways: through the short-term rate of interest, which

primarily affects the cost of holding goods temporarily; through the long-term rate of interest, which primarily affects the marketability of fixed capital equipment; and through the availability of loanable funds, which directly affects the business man's capacity to purchase any real resources—including finished goods, labour, &c., and goods in course of production.

For reasons to be discussed in Chapter 9, the banker deliberately confines his lending, in the main, to short-term purposes, and this means that, of all business transactions, it is the holding of stocks of finished goods or marketable raw materials that he most likes to finance. The 'liquidity' of the trader's balance-sheet position, if substantial marketable stocks are held, provides attractive security for the banker and makes it unnecessary for him to consider at all closely the longer-term earning capacity of the borrower. The most direct influence of the banker would therefore seem to be exerted through his greater or less willingness to lend at any time, and particularly through variations in the rate of interest he charges on the short-term advances to business men; and some economists, notably Professor R. G. Hawtrey,[1] have regarded this as the main link between the bankers and the tempo of economic activity. The argument runs thus: operators in most lines of business hold stocks, in one shape or another, in order to meet variations in customers' demands and in order to avoid the consequences of interruptions in the supply of materials, &c. The convenience of holding stocks has a certain money value to the dealer, and he balances this value against the cost of holding stocks. Among the costs of holding stocks is the interest that has to be paid (or, if the money is provided by the dealer himself, might have been earned elsewhere) on the money borrowed to enable the dealer to acquire and hold the stocks. Consequently a rise in the

[1] The principal works in which Professor Hawtrey develops this theory are *Currency and Credit*, *The Art of Central Banking*, and *A Century of Bank Rate*.

rate of interest charged on advances by the banks constitutes an increase in the cost of holding stocks and will provide an incentive to dealers to reduce stocks. This they can do only by buying less rapidly than they are selling. They exchange goods for cash—they are 'absorbing cash', which they use to pay off debts. If this happened on any considerable scale producers of the goods held in stock would find sales falling off, and they would tend to cut prices and/or curtail output. The typically deflationary symptoms of falling prices and output would thus appear. Contrariwise, if the banks reduced their interest charges, the cost of holding stocks would fall and dealers would be encouraged to increase their stocks, and this they could do only by buying more rapidly than they were selling. Orders to producers would rise—output expand—employment increase—money incomes rise—and so on. Inflationary conditions would, in short, be promoted by a reduction in bank interest charges.

The importance of this argument depends upon just how much weight is attached by entrepreneurs to changes in the interest charge when they are deciding to add to or subtract from their stocks. There are many other costs of holding stocks—warehousing, insurance, allowance for perishing, and, above all, the risk that the price of the commodity will fall while it is being held. These various charges vary very much from one commodity to another, but in most cases they are sufficient to swamp any but the most extreme changes in interest rates. The supposition that changes in the rate of interest are therefore unlikely to have substantial effects on 'buying for stock' has been confirmed by such direct inquiries as economists have made of business men. There may well have been rather different economic conditions in the past (perhaps in England in the first half of the nineteenth century), and perhaps there are conditions in some trading communities today, in which variations in dealers' stocks are highly sensitive to the rate of interest; but in general, in speaking

of most modern economies, we can say that the bankers cannot *substantially* influence economic activity through this particular channel.

11. *The Connexion between Short-term Rates and Long-term Interest Rates*

In the main the interest rates directly determined by banking policy are rates for short-term financing. The operations of the Federal Reserve System since 1937 have been quite peculiar in their control not only of short-term interest rates but also of long-term interest rates. Elsewhere the bankers have felt that they are doing enough if they control short-term rates. The influence of the bankers' decisions, however, penetrates far beyond the temporary business operations that they themselves prefer, because there are substantial connexions between short-term rates and long-term rates of interest. Any pronounced change in short-term rates is always associated with some change in long-term rates; and banking policy is thereby enabled to influence those business decisions which turn on the level of long-term interest rates, as well as on those rather rarer cases in which short rates are of direct importance. If we are to understand how banking policy affects economic activity, we must not be content with observing that changes in long-term rates are generally associated with changes in short-term rates: we must attempt to explain *why* a pronounced movement in short-term rates is bound to be followed by a movement, in the same direction, in long-term rates.

In the first place it is important to remember that a rate of interest is a *price*—the price of money now in exchange for money at some later date. Every price has its own market. To find the connexion between two prices we must look for some connexion between the short-term capital market—the market dominated by the relations between banks and their customers—and the long-term market. (It is convenient for the moment to assume that the capital

market is just divided in this simple way: the complications will be referred to presently.) What, then, are the points of contact between the short-term capital market and the long-term capital market?

The answer to this question falls into two parts, for some of the points of contact are among the banks' customers (who have the possibility of redistributing both their borrowing operations and their assets) while other points of contact are in the banks themselves, since the banks operate not only in the short-term market but also in the long-term market (in that they operate in long-term government securities). We shall therefore suppose that the authorities have decided upon a sharp rise in short-term interest rates, and we shall consider what reactions, first of bank customers and then of the banks themselves, will force a rise in long-term interest rates.

We are supposing that the banks, following official policy (which would be indicated by a rise in the official Bank Rate) raise their interest charges on all loans and overdrafts, and that they raise also the interest allowed on Time Deposits. Individuals and firms have their liquid assets (apart from working balances of money) distributed between Time Deposits and long-term securities, and their liabilities include long-term claims against themselves (debentures, mortgages, &c.) and short-term claims against themselves, in the shape of advances from the banks. Any one firm or individual is unlikely to have assets and liabilities of all these classes at once: a firm owing much to the bank on overdraft is unlikely, for instance, to hold at the same moment a Time Deposit. But every business can ordinarily switch to some extent from one to another—can change, that is to say, the distribution of its assets and liabilities in order to profit from changes in relative interest rates. Banks prefer temporary financing, but a business requiring funds temporarily does not necessarily have to go to the bank—it may have some long-term securities which it can sell, or it may be willing to issue to the investing

public new debenture claims on itself. A rise in bank-interest charges would therefore, if Stock Exchange prices remained unaffected, cause a flood of sales of securities by firms which now wanted to avoid borrowing from the banks. Actually the stock market, knowing quite well that this would happen if it did not alter prices, proceeds to mark down prices at once—and a fall in security prices means a rise in their yields. Thus the long-term rates of interest rise because operators in securities know quite well that there would be a flood of sales if they did not mark prices down.

The attitude of the banks themselves is apt to reinforce this tendency. When short-term rates of interest rise, the banks find their more liquid short-term assets relatively more attractive, and they think too that the attitude of the central bank in pushing up short rates means that long-term rates are likely to go upward rather than downward in the near future—i.e. security prices are likely to fall rather than to rise. To avoid capital depreciation they would do well to postpone purchases, and rather to sell before prices drop further. The banks thus tend, when short-term rates rise relatively to long-term rates, to 'go more liquid'—to prefer shorts to longs. This tendency of the banks themselves affects the stock markets in the same way as does the business man's inclination to finance himself by selling securities—it increases the general pressure to sell at the old prices, and in anticipation of this selling pressure the stock-market operators mark prices down—i.e. put up the long-term interest rates.

Similarly, when bank interest charges are reduced, the business men would incline towards holding on to their securities, preferring to continue temporary finance at the bank, if stock-market prices did not rise. And the banks themselves will think it worth while to go in for larger holdings of long-term securities. The increased disposition of business men and the general investing public to hold on to their long-term securities, together with the disposi-

tion of the banks and other financial institutions to shift from short to long assets, will force stock market prices upward—that is to say the long-term rates of interest (the yield of long-term securities) will be forced downward.

Thus, even if the direct operation of the monetary authorities is confined to short-term rates of interest, the long-term rates of interest will be driven in the same direction by the market forces whose existence depends on the 'spilling over' of capital supply and demand from one part of the market to the other. In the United States, the central bank (the Federal Reserve System) has short-circuited all this by operating directly on the long-term rates of interest. For many years now the Reserve System has had its own operator in the market for long- and medium-term government bonds, ready to buy or sell these bonds at prices which have been varied only very little. As the Reserve System has always been known to have at its command resources very large in relation to any amount of government bonds that could conceivably come on the market, the willingness of the System to buy or sell at certain prices has fixed the market rigidly at those levels, and thus the System has fixed completely the long-term rate of interest on government securities. Investors, in deciding to buy securities of any class, will be influenced in their bidding by the rate they could get by going into government securities, and for this reason the Reserve System's action has an important bearing on all security prices.

In England the monetary authorities have never assumed this complete command over the long-term interest rates, but have been content to influence the long-term rate via their complete control of the short-term market. The Federal Reserve System's mastery of the situation must in large part be ascribed to the fact that the U.S. National Debt is not as large in relation to the normal resources of the central bank as is the case in England, though this technical factor only becomes of importance when the authorities are forcing the market against the prices (and

therefore interest rates) that private individuals and corporations believe to be natural. Public opinion about the future course of interest rates is a very powerful factor in the long-term market, and a mere reduction of short-term rates may not do much to modify that opinion; and unless opinion is modified little impression will be made upon long-term rates even if the authorities are prepared to operate in the market on a very large scale.

This matter, which is of critical importance to an economic policy depending upon encouragement and discouragement of private investment, may perhaps be better understood by an arithmetical example, using simple (if extreme) figures. If the public thinks that the long-term rate is going to settle in a year or so at 5 per cent., then no matter how low short-term rates fall, the long-term rate will not fall far below 5 per cent. If we suppose 2½ per cent. Consols to be in practice irredeemable, a general expectation that in a year or so the long-term rate will settle at 5 per cent. implies that at that time the price of Consols will settle around 50. Anyone who pays *now* a price much above 50 will have to meet severe capital depreciation in the next year or two. It will be better to hold off the market, holding cash although the latter yields no interest, rather than incur a capital depreciation that would swamp any yield obtained from interest payments on the Consols. A man would do better for himself by holding cash or lending his money out in the short money market at a very low rate of interest than by buying Consols immediately at 62. A man with £620 to invest in Year 1 could, by buying Consols at once, secure a perpetual income of £25 per annum; but by waiting until Year 3 he could use his £620 to buy Consols yielding £31 per annum; alternatively, he could use £500 to secure the income of £25 per annum, and have £120 'profit' to set against the low interest he has had to take on his £620 during the two years through which he waited for the price of Consols to fall. If everybody expects the market to move in this way, no one will buy in Year 1 at

62, and all holders will wish to sell—the pressure of sales unmatched by demand would send the price down, and (on our assumptions) it would in fact fall almost to 50—perhaps to 52, the exact figure depending on the precise level of short-term rates. Thus the effect of a change in short-term rates upon the long-term market is narrowly limited by what people expect the long-term rate to be in the near future; and unless the change in short rates of itself causes a decided change in expectations about the long rates, even a very great change in the short rates will cause only a very small change in long rates.

This importance of the market's expectations about long-rates was abundantly illustrated in the experience of London markets during the nineteen-thirties and nineteen-forties. If the authorities want to pursue a 'Cheap Money Policy', it is vital that the market should be persuaded that the long rates are going to settle down at a low level. In 1932 short rates had been pushed by the authorities to very low levels, but long rates fell relatively little until the great War Loan Conversion announcement. This was made in such a way, the ground was so thoroughly prepared, and the propaganda so struck the minds of the investing public that there was, very suddenly, a general persuasion that the 5 and 4½ per cent. rates of the nineteen-twenties were an abnormality linked with conditions that had now disappeared. Long rates came tumbling down. In the rearmament years the market moved the other way, without any pronounced change in the short-money market. Early in 1937 there was a decided slump in gilt-edged prices bringing long-term rates of interest clearly above 3 per cent., the immediate occasion being the realization that the government was about to borrow large sums for rearmament. The investing public and the Stock Exchange reacted to quite an irrational extent. But the mere fact that the City Editor of *The Times*, in fair representation of City opinion, wrote about the market settling down when 'a round three and a half per cent.' (yield on Consols) was

reached, meant that the long-term rate *had* to move to something like that level immediately quite irrespective of the fact that there had been in that particular month or so no such revolution in the money-market or general economic situation as would justify an abrupt adjustment of stock prices from a 3 per cent. to a $3\frac{1}{2}$ per cent. basis.

Another example of the power of opinion, backed by a very large volume of privately held government securities which can be thrown on the market to impede a movement of the long-term rate of interest is afforded by the ill-starred 'Dalton drive' of 1946–7. After the successful cheap-money policy of the nineteen-thirties, a 3 per cent. rate of interest was comfortably held throughout the war of 1939–45. Then in 1946–7 the authorities, by exploiting to the full a mechanism which is analysed in the next chapter, and by propaganda in which the then Chancellor of the Exchequer played a prominent part, forced the long-term rate down momentarily to about $2\frac{1}{2}$ per cent. The attempt failed fundamentally because the market was convinced that, in the light of the basic economic forces of high demand for capital investment and scarcity of resources, $2\frac{1}{2}$ per cent. was an unnaturally low rate—a rate that could not be held. Believing that $2\frac{1}{2}$ per cent. could not be held meant believing that security prices would fall. Government securities were therefore not worth buying. Their 'unnaturally' high prices were only held by continued official (though indirect) support of the market. As more and more holders of government securities came to believe that this was a mere juggling operation and that prices must fall, more and more unloaded their holdings and the official support began to involve an enormous pumping of money into the market. The authorities eventually became frightened of the length to which they were having to go, and ceased to support the security prices. The latter promptly fell away, and the long-term rate was soon over 3 per cent. —a level thereafter held for some considerable time by a free market, because people thought it a level that,

given the various government controls, could reasonably be held.

Another example of the force of the market's belief in a normal or natural level for the long-term rate of interest is afforded by the war-time experience of Denmark, when conditions under the German Occupation provided a frame of almost laboratory simplicity for the study of this phenomenon.[1] Strict price control and other circumstances prevented the development of any investment boom of the ordinary kind, but the Germans pumped more and more money into the system. Individuals and institutions seeking use for idle balances turned to the bond market, and rates of interest fell. But over a period of many years before the war the rate of interest had varied only between $4\frac{1}{2}$ and 5 per cent., and any rate outside this range was therefore looked upon as abnormal, not likely to be held for very long. The pressure of surplus money in the market did force bond prices up somewhat—that is, it forced the long-term rate of interest down. But no matter how great was the pressure of newly created money, the bond rate *would not* fall below about 4 per cent. Rather than buy bonds at prices yielding a lower rate people and institutions would hold cash yielding nothing at all—because they believed that bond prices would soon fall to levels appropriate to the normal $4\frac{1}{2}$–5 per cent. yield. This fall in bond prices would, it was thought, come with or soon after the end of the war. Important Allied victories, such as El Alamein and Stalingrad, caused falls in bond prices—because they were thought to bring nearer the reversion of the rate of interest to its normal level.

III.* *Long-term Rates of Interest, the Availability of Capital Funds, and Investments in Fixed Capital*

The monetary authorities, in attempting to operate on the long-term rate of interest, are thus peculiarly at the

[1] This paragraph is based on a very able article by Kjeld Philip in the *Review of Economic Studies*, vol. xvi (2), No. 40.

mercy of public opinion. Propaganda may help the authorities—but if it is not attuned to the investing public's ear it may make matters worse (as perhaps it did in 1947). In so far, therefore, as monetary policy hangs upon the effect of changes in the rate of interest, it hangs upon a slender thread. Things are, however, a little brighter than that. Rising prices for long-term government bonds—a fall in the 'pure' long-term rate of interest—are logically associated with rising prices for securities generally (including those of public utilities and industrial companies), a greater willingness of the 'investing public' to take up new securities, and a readier flow generally of capital funds into the hands of business men who are ready to spend them on the construction of fixed capital equipment.

In the previous section we were discussing only the prices and yields of government long-term bonds. There are, of course, quite other classes of securities of far more direct interest to the industrial borrower. Besides the government (gilt-edged) securities, there are bonds issued by public utilities; debentures, preference shares, and ordinary shares of all sorts and sizes of industrial and commercial undertakings; and all these classes of securities are subdivisible into very many grades. At any given moment, however, there will be a certain relationship between the prices of securities of various grades, a relationship reflecting the investing public's preference for one grade as compared with others. *Given these preferences*, a rise in the price of one large class (e.g. government bonds) resulting from monetary operations that have depressed short-term interest rates, must be followed by a rise in the prices (a fall in the yields) of all other grades. Provided the public has a definite preference for one particular distribution between the various classes of its assets, a shift in the price of one must be followed by a general shift in the whole range of prices. It is true that the effects of a fall in the prices of government bonds on, say, ordinary share prices may be entirely obscured by a simultaneous shift in the

public's preferences in favour of ordinary shares—an actual rise in the prices of the latter following the fall in the gilt-edged market. But the ordinary shares will tend to stand lower *than they would otherwise have done*. The general position in the capital market will, that is to say, have been made, by the movement of government bond prices, less favourable than it otherwise would have been to new seekers of money to spend on capital development.

A fall in the interest rates at which money can be obtained for new capital development will automatically increase the attraction of such development. When a firm is thinking of embarking on some capital extension—whether it be the purchase of a new machine, the doubling of a railway track, the addition of another runway to an airfield, or the sinking of another shaft at a mine—its decision will depend on a number of factors, some purely technical, others economic. The technical factors will include such points as the difference the investment will make to the physical output of the firm, the rapidity with which the new equipment will wear out, and the ease with which the extension can be fitted into the general framework of the firm's activities. The strictly economic questions will be, what will be the price of the additional product? and at what rate of interest can the purchase money for the new equipment be raised? Given all the technical factors, and given the firm's estimate of the receipts that will be realized from the use of the machine, whether or not the capital extension is embarked upon will depend upon the rate of interest at which money for such purposes can be raised. The lower the rate of interest, the more likely is the firm to decide that the capital extension is worth undertaking. On the other hand, the higher the rate of interest the less attractive is any form of capital extension.

Two examples may help to make this clear. Suppose a printing-works to be contemplating the purchase of another machine of some kind. The machine is, we will suppose, priced by the machine-makers at £1,000. Then the firm

calculates that the machine would last twenty years, and that after making allowances for repairs, depreciation, adjustment of labour costs, &c., but not allowing for the interest charges, the use of the machine would make a difference of £50 a year to the gross profits of the firm. Then, as long as the rate of interest, at which the firm can obtain £1,000 for twenty years, is below 5 per cent., a net profit is to be gained from the introduction of the machine (for 5 per cent. on £1,000 = £50). When the effective rate of interest is 5 per cent. the venture is only just worth while —the machine is then a 'marginal' investment. When the effective rate of interest is above 5 per cent., the firm would incur a loss if it acquired the machine in question. It should be noticed that the relevant receipts are the *extra* receipts that would result from the introduction of the machine —whether the firm is incurring a loss or a profit on its previously invested capital is irrelevant (though it may affect the rate of interest at which the firm can obtain the capital sum required). Or suppose that a railway is contemplating electrification of part or all of its system. The managers have to make a number of estimates of the results of electrification—changes in the volume of traffic, in labour costs, in the costs of electricity, &c. Suppose that their guess is that an electrification plan, which would involve a capital expenditure of £20 millions, would increase the gross profits (or diminish the gross losses) of the company by a million pounds a year. Then, whether the railway was previously paying its way or not, the electrification scheme would appear worth adopting as long as the rate of interest at which the railway could obtain £20 millions was not above 5 per cent. Once the rate rises above 5 per cent., the venture becomes completely unattractive, unless anything happens to make the authorities revise their estimates of the results of electrification, or the costs of the electrification process itself fall.

Not only will these decisions have to be made about *new* capital development: precisely the same considerations

must determine whether or not a firm should replace some plant which is wearing out. Reinvestment is only worth while if the firm could not do better for itself by investing the depreciation fund elsewhere.[1] As railway engines wear out, the railway company can always choose between replacing them and not replacing them, just as it can choose between electrifying and not electrifying its suburban steam lines.

These examples have been highly simplified in order to enforce the main point—that the effective rate of interest will be one of the crucial factors in coming to the decision whether or not to embark on capital development. But, lest we should overrate the efficacy of an interest-rate policy, it is important to emphasize the extent to which the entrepreneur's estimates are likely to be guess-work. In the railway electrification example given above, it was assumed that gross profits would, as a result of cheaper running, larger traffic, &c., immediately rise to a new level and stay there. In fact this is most unlikely to be the case. The growth in traffic is likely to be a gradual process, and whether the enterprise is or is not worth while will depend to an important extent on how rapidly the growth of traffic occurs. If the growth is very slow, that is equivalent, from the company's point of view, to extra capital outlay, even if the growth does eventually attain the expected maximum. The rapidity of growth is, of course, very much a matter for conjecture. The responsible people will have various earlier experiences to work on; but to some extent every new enterprise is unique, and this is especially true of such big capital innovations as these. Moreover, labour costs and price levels over a period of twenty years or more will be extremely conjectural. As compensation for all these uncertainties, which are involved in the decision to

[1] In extreme cases the relevant rate of interest may be quite different. For the alternative to replacement of, say, a flour-mill, may be holding gilt-edged securities, while extending an established flour-mill may mean issuing new debenture stock for which the public has little taste.

invest, the entrepreneurs will look for some chance of profit, and their stress on this profit margin will vary very much from time to time, according to whether they are inclined to look through rose-coloured spectacles or to take gloomy views of the future.

The uncertainties that obscure the business outlook are thus of great practical relevance to the question of the effect of interest changes. Many of the estimates business men make are necessarily highly conjectural, and against the wide margin of error a fractional change in the rate of interest may appear to make no difference worth bothering about. Far more important is likely to be the business man's general frame of mind about the future. In a depression things look so gloomy that no conceivable drop in the rate of interest is likely to induce him to embark upon any but the most blatantly desirable ventures. In a boom, on the other hand, things look so rosy that a fractional rise in the rate of interest, to be paid on the capital sum required, is unlikely to deter him from some investment, failure of which appears unthinkable. Even public investments—those made directly by central and local government bodies—are susceptible to similar influences that very easily outweigh the influence of the rate of interest. A town council considering the construction of public baths, for example, will find that the higher the rate of interest, the higher the 'rate' in the pound which is necessary for financing the service of the debt incurred for the purpose. But experience, decade after decade, has shown that public authorities are less influenced by a slight difference in the rate poundage produced by a change in the rate of interest than by whether or not they feel that the town is prosperous and 'can afford' the public works.

The reservations that we must therefore have in mind, when we are considering the stimulus given by a fall in interest rates to the demand for capital goods, of course apply with varying force in varying circumstances. In most branches of manufacturing industry, for example, a

continuous (but not constant) stream of inventions occasions high obsolescence allowances that completely swamp the interest charges on a new machine. On the other hand, much capital outlay by the great public utilities is on construction of earthworks, permanent way, and other items that have very long lives and will not easily be replaced by alternative equipment. For such things as these the depreciation and obsolescence allowances are quite small, and the interest charge is correspondingly more important, and more *visibly* important to the firm or public body that will have to pay the piper. Dwelling-houses are undoubtedly among these items that are relatively 'interest-sensitive'—the interest on the original capital outlay is a very large part of the annual rent charge. More generally, we can say that the more durable is a capital good, and the less uncertain is its productivity, the more sensitive will be the demand for it to changes in the rate of interest.[1]

When the effectiveness of the rate of interest as a stimulant of demand is hedged about in this way, the influence of monetary factors in determining the volume of economic activity seems to be slight indeed. Changes in the rate of interest often, however, receive important reinforcement from the changes in the practical *availability* of capital funds that accompany changes in interest rate when the latter is engineered by the monetary authorities.[2] A cheap-

[1] For fuller analysis of these conditions and for the evidence afforded by empirical research, the reader should go to the many articles, &c., which have appeared on this subject during the last twenty years. This literature is reviewed in my paper *The Rate of Interest as a Weapon of Economic Policy* in *Studies in the Price Mechanism* (ed. Wilson and Andrews, Oxford, 1950).

[2] In this chapter, and indeed in most of the book, I have assumed that the commercial banks Advances/Deposits ratio is not as high as they would like it to be. If (as was the case in pre-1914 England and is still the case in many other countries) this ratio is at its maximum, an increase in the cash basis will allow bankers to increase their Advances and so will directly increase the availability of funds for capital expansion by business firms. In present English circumstances, in which bankers are already fully meeting the acceptable demand for Advances, the only direct result

money policy implies a sufficient pressure of money supplies to satisfy all the people and institutions who think that the rate of interest will go up presently and who therefore prefer to hold money rather than government bonds at present prices. Insurance companies, building societies, and ordinary business firms will all be tending to hold rather more money than they would normally expect to hold. It is in fact by this glutting of markets with money that we have supposed the authorities to be enforcing their low interest rates. Now when financial institutions and business firms hold unusually large balances, and are loth to 'invest' them in government bonds, other ideas in course of time enter their minds. They decide perhaps that although government bonds are not worth buying because their prices are high and yields low, it would be worth engaging in some quite definitely speculative proposition that would give an altogether higher yield, in preference to 'holding all that money idle'. At any rate, they may be venturesome with *some* of the money. For business firms especially, the unusually high liquidity of their balance-sheets will tell in course of time—the power of the cautious directors to resist the cajolings of their more venturesome colleague, who wants to set up a branch factory or install a new kind of machine, will be worn down more easily when there is money in the kitty—or money to be borrowed unusually easily from an insurance company or finance house—than when the cash could be had only by going to the bank and mortgaging the firm's assets up to the hilt. Similarly in the building world: when building societies find rates low and their liquid funds are mounting, they will find other ways, as well as cutting mortgage interest rates, for expanding their loan business. They will reduce

of an increase in the cash base is an increase in other assets—government securities—whose prices therefore rise. Under present circumstances, that is to say, English banking policy operates directly only on interest rates and not (except very indirectly) on the availability of loanable funds (but see Chapter 11).

the first 'down payments' on a house from 20 to 10 or even to 5 per cent., and they will extend the maximum repayment period from 15 to 20 or even 25 years, so as to inveigle poorer and poorer people into buying houses.[1] In a variety of ways the sluices of the capital market will be opened, so that it is not just a matter of loans being cheaper, but of all kinds of enterprisers, who previously could not get hold of money at all, or could not get it on any tolerable terms, now being able to get it to spend on capital development.

With this important reinforcement of abundant availability of funds, cheap money does stimulate the demand for capital goods. Rising demands for new machines and more extensive schemes of capital development lead to rising purchases of raw materials and engagement of labour. Demand for more raw materials simply passes on to other entrepreneurs—those producing raw materials—the onus of engaging more of the original factors of production. Momentarily the increased demand may be met by drawing on stocks; but very quickly increased production must appear. If there has been a large surplus of unemployed factors the increase in production in the capital goods trades can perhaps be effected without drawing much upon factors previously employed in consumption goods trades, and therefore without any necessity for a marked rise in rates of remuneration. If, on the other hand, the growth in capital expenditure occurs when capacity (of labour, equipment, &c.) was already more or less fully employed, the capital goods trades are able to increase their resources only by offering higher remuneration. In either event, the next stage of the process is that the money incomes of the people in the country will have increased —either because a greater number are employed at the

[1] Building Societies did in fact operate just in this way under the pressure of 'cheap money' in the nineteen-thirties in Britain; and their activities played an important part in encouraging the housing boom that helped to pull Britain out of depression.

old rates of remuneration, or because people formerly employed are now receiving higher wages, &c. (Normally both results will appear quickly, though the latter will be more prominent in the later stages of an inflationary movement.) This increase in income will be devoted partly to savings and partly to increased expenditure on consumption goods. To the extent that it goes the latter way, entrepreneurs in the consumption goods trades will be induced to expand production, thus adding further to the money demand for the factors of production. Then the provision of both working-capital and fixed-capital for the consumption goods trades will, as a result of higher prices and a generally more prosperous atmosphere, appear more attractive than before. The same change in atmosphere will be making public bodies also more inclined to embark on expensive public works and, in addition, the private capital extensions will have created a demand for public capital extensions like new roads, extended electricity cables, drainage schemes, &c. A very decided upswing in economic activity may thus eventually get under way.

The converse process may easily be deduced from the above. When interest rates rise and there is less money about seeking *investment* outlet, capital extensions become less attractive and more difficult to finance. The 'awkward' director, pointing to the company's balance-sheet, is able to defeat the brilliant technician whose replanning of the factory would be so expensive. Employment in the capital goods trades shrinks and total money income follows suit. Consumers adapt themselves to this shrinkage in money income partly by saving less (in individual cases often dissaving) and partly by cutting expenditure on current consumption. Production and employment in the consumption goods trades decline, capital investment in those trades becomes less attractive, the activity of the capital goods trades shrinks even further, and so on.[1]

[1] The doctrines of the Multiplier and the Relation, which deal more

Thus, through devious channels connecting short-term rates with long-term rates of interest, and connecting long-term rates and the availability of capital funds with the pace of capital replacement and development, the monetary authorities may hope, by their actions in regulating the supply of money, to influence the level of economic activity. The potency of this influence has perhaps sometimes been overrated and economists are nowadays more inclined to stress other, more direct, methods of stimulating or checking business activity. But even those most sceptical of the monetary weapons would, I think, agree that such influence as the monetary authorities have should be directed towards the major objectives of government economic policy. A restraining policy—a 'disinflationary policy' as it is sometimes called—demands the aid of a restraining monetary policy. The positive contribution of the monetary weapon may be slight, but at the very least it should be creating a climate favourable to the general restraint (or stimulus) being exercised by government economic policy more generally.

At times in the past monetary policy has been held to have exercised much greater effect than it is believed to have nowadays; and it may well be that it was then more potent than it is now. The complications in the long argument given in this chapter are not always or in all places of equal force, and it would be very surprising therefore if the monetary weapons of 'cheap money' and 'dear money' had the same force at all times and in all places. The practical conclusions of an economic argument depend upon institutional assumptions that have no universal validity, and the comparative usefulness of monetary weapons must therefore be judged by every generation and by every

rigorously with these upswings and downswings in economic activity, are to be found in Keynes, *General Theory of Employment, Interest and Money*, and Harrod, *Trade Cycle*. A difficult but very important book, carrying the theory much further, is Hicks, *A Contribution to the Theory of the Trade Cycle* (Oxford, 1950).

country for itself. That the climate created by monetary policy should *accord* with the general economic policy of the Government is, however, a proposition of universal validity, and it is this proposition that provides the ultimate justification for subordinating the central bank to the machinery of democratic government.

8

CHEAP MONEY, 1946-7: A STUDY IN THE MECHANICS OF MONETARY POLICY

1. *The Occasion of Official Intervention*

IN the nineteen-thirties the British monetary authorities, freed from the constraints imposed by a combination of the gold standard, a weak international trading position, and a narrow margin of reserve, stumbled upon the policy of holding interest rates at a stable and low level. Now stable interest rates could be maintained only by keeping the commercial banks supplied with cash, and with any other liquid assets they cared for, in the amounts necessary to meet the demand of banks and public for liquidity at the given rate of interest. The authorities were somewhat slow to perceive this implication of their policy and there were some curious incidents when extraneous circumstances, and even occasionally official action, were allowed to upset the even tenor of cheap money. There were even times when the official right hand and the official left hand were pulling in opposite directions.

By the time the war came, a good deal had been learned from these experiences, and what still remained to be learned was quickly learned under the overriding compulsion to avoid all financial obstacles to the mobilization of the economy. After a curiously unenlightened start in 1939, when under the shadow of the precedents of 1914 Bank Rate was held for two months above the 2 per cent. level, the authorities settled down in 1940–1 to a rigid cheap-money régime which remained throughout the remainder of the war and is indeed still (February 1950) a corner-stone of British monetary policy. The Government had to be kept supplied with a sufficient amount of

bank deposits to pay its bills. What it could not get either by borrowing, on terms acceptable to the Government itself, from the public or by taxation had to be created by the banking system and handed over to the Government in exchange either for Treasury Bills or for Treasury Deposit Receipts. In order to allow the banking system to provide the required total of deposits the authorities had to provide the banks with the cash basis necessary for maintaining an adequate ratio of cash to deposits. £100 millions more required by the Government for covering its deficit meant an extra £100 millions to be called for against Treasury Bills and Treasury Deposit Receipts issued to the banks. But as the £100 millions were paid away by the Government into private hands, the ordinary deposit liabilities of the banks went up by £100 millions. To maintain their cash ratio, they would be compelled to call in about £9 millions from the discount market, which would borrow £9 millions from the Bank of England. This addition to the cash basis had to be forthcoming if the government's wants were to be met, and the authorities were free to decide the rate of interest at which the cash should be made available. If the Bank of England always stood ready to release or absorb cash at an unchanged rate of interest, the market rate on those assets in which the Bank of England dealt could never vary from the Bank's chosen rate.

It was in this way that the Bank of England's 'ever open back door' came into operation. The Bank's operator in the market is always ready, at the initiative of the market, to exchange cash for Treasury Bills or Treasury Bills for cash at the fixed rate of ½ per cent. per annum. The Bank's operator always has some preferences for particular maturity dates in the Bills he takes, but the knowledge that he will, whenever the market is short of cash (the banks being short of cash), take Treasury Bills of one maturity or another is sufficient to prevent the rate for all Treasury Bills from rising above ½ per cent. Similarly, the knowledge that Treasury Bills can always be bought from the Bank's

operator is sufficient to keep the rate from falling below ½ per cent.[1]

This pegging of an interest rate is, of course, confined directly to the assets in which the Bank's operator (its reversible automatic machine) is ready to deal. That is to say, it is confined to Treasury Bills. The Bank of England's open intervention in markets for longer-term paper is exceptional.[2] Consequently there is no direct control of other interest rates. Only by being willing to take up indefinite amounts of longer-term securities could the authorities stabilize the longer-term interest rates, and in general they have not been willing to do this. What they have done is to keep the short rates pegged and to sit back and allow natural market forces to pull the longer rates down towards the extraordinarily low short rates. These 'natural market forces' linking various interest rates have already been discussed in Chapter 7 above. At any time low rates in the discount market make bankers unwilling to pay any but the very lowest rates on Time Deposits, and for many years now this natural market behaviour of the bankers has been reinforced by official instruction, under which the rate on Time Deposits was in November 1945 limited to ½ per cent.[3] Holders of liquid funds were thus given a strong incentive to buy medium-term or long-term securities that were yielding 2 to 3 per cent. At the same time the possibility of financing some trading trans-

[1] In practice, operations are now almost entirely in the direction of purchases of bills by the Bank, because the authorities deliberately 'keep the market on its toes' (i.e. rather short of cash) which they are enabled to do by pitching the T.D.R. call on the high side each week. (The T.D.R. call is made after the authorities know how much the market is taking in new Treasury Bills in the ensuing week.)

[2] One of these exceptional occasions was in November 1949, when the Bank's broker stepped into the long-term gilt-edged market in order to steady a demoralized market—not to interfere with the underlying trend of prices.

[3] Previously 1 per cent. had been paid on certain classes of Time Deposits. At the same time the rate on Treasury Bills (the open-back-door rate) was reduced from 1 to ½ per cent.

actions by discounting a bill of exchange in the discount market made the larger customers of the banks rather more critical of the conventional 4 or 5 per cent. charged on overdrafts. Every bank, therefore, rather than see its overdraft business replaced by bigger holdings of Treasury Bills at ½ per cent. tended to cut its overdraft rates a little, at any rate at competitive points. Lower overdraft rates cause business men to be inclined to use overdrafts more and hold on to securities that they might otherwise have liquidated. Lower overdraft rates therefore imply a reduced selling pressure in securities markets.

How far this tug of low short rates on the longer rates will be able to pull the latter down depends very much, as we have already seen, on what people expect to happen to interest rates in the future. Expectation of a rise in interest rates—i.e. a fall in security prices—is likely in general to be more widespread the lower interest rates already stand (the higher security prices already stand). An implication of this is that the authorities can only push interest downwards by buying a number of security holdings which increase very rapidly as the authorities bid the security prices up higher and higher. The only chance of escaping the compulsion to support an ultra-cheap money policy by heavy purchases of medium and long-term securities lies in a revision of expectations—the spread of a belief that interest rates are going to settle down at a level lower than that hitherto expected.

The success of the war years, in complete control of the short-term rate, appears to have encouraged the Government to believe that it could by one means and another drive the medium and long-term rates downward; and it is this effort that we must now describe in the light of the considerations just mentioned. Through most of the war the Treasury Bill rate had been held at 1 per cent., this being the rate at which the automatic reversible machine at the Bank of England's back door was set to work. With this as the money-market background, the market in

medium- and long-term government securities had settled down at prices giving a yield of about 3 per cent. on long-term bonds ranging down to about $1\frac{1}{2}$ or 2 per cent. for the shorter terms. The immediate objective of the ultra-cheap money drive initiated by the Chancellor of the Exchequer in the autumn of 1945 was to get the long-term rate down to $2\frac{1}{2}$ per cent., and in his more optimistic moments he sometimes indicated an expectation that it could be driven down yet further. The main path to this objective was apparently the revision of public expectations of the future of interest rates, and for this purpose the Chancellor took every opportunity to propound his view that interest rates should come down and that he was going to be successful in his attempt to get them down. These words were supported by deeds in the shape of a frontal assault on short-term rates—the Treasury Bill support rate and the Treasury Deposit Receipt rate were both reduced by $\frac{1}{2}$ per cent., and the limit now imposed on ordinary time-deposit rates amounted broadly to the same reduction.

The impact of these words and deeds on public expectations was certainly in the direction desired by Mr. Dalton, about one-quarter of one per cent. being knocked off the yield of Consols in about six months. But the second quarter of one per cent.—between, say, $2\frac{3}{4}$ and $2\frac{1}{2}$ per cent.—proved a much tougher proposition and the Treasury found it necessary to bring into action their second method of attack, the big battalions of the resources of the 'Public Departments'. I have explained above how, given the state of expectations, the market rate can be revised by absorption by the authorities of securities unloaded by the more sceptical holders. This line of attack was now adopted, not as a permanent arrangement but as a temporary expedient that would hasten and consolidate the general revision of expectations that Mr. Dalton by smooth words and by rough words was seeking to effect.

II. *The Mechanism of Support*

The resources brought into play are those of the 'Public Departments'. Chief among these are the funds of the Post Office Savings Bank, the trustee savings banks, and the great social insurance funds, all of which are entrusted to a body called 'The Commissioners for the Reduction of the National Debt'. These National Debt Commissioners, as they are commonly called, are a separate body established by Parliament for another purpose very many years ago; but they include the Chancellor of the Exchequer and the Governor and Deputy Governor of the Bank of England, and it is generally understood that their policy in distributing their resources between different British Government securities can be trimmed to suit the exigencies of Treasury operations.[1] In addition to these and other similar funds, the sterling assets of the Exchange Equalization Account, though originally in the form of Treasury Bills only, can be in large part switched to other government securities. The securities held in the Issue Department of the Bank of England may also be regarded as variable in composition at the wish of the authorities. Altogether these funds already totalled thousands of millions at the time of the ultra-cheap money drive.[2] This is a formidable *masse de manœuvre*. The authorities can, to the extent that Treasury Bills are held, unload the Treasury Bills on to the banks, using the ordinary bank deposits received in payment to take up medium-term

[1] There is indeed no reason why it should not be so. If Parliament does not like what is going on, it is fully entitled to say so and to oblige either the Treasury or the Commissioners or both to alter their course. What was happening in 1946–7 was fully realized outside and Parliament could, had it so wished, have demanded a full inquiry.

[2] In an extremely useful article in its February 1950 issue, the *Midland Bank Review* noted that the funds at the disposal of the National Debt Commissioners in 1949 totalled about £3,750 millions, and on the basis of this and other figures it estimated that in 1949 the authorities held 'something like fifteen per cent. of the marketable debt'. The figures in 1946–7 must have been somewhat smaller, but still thousands of millions.

and long-term securities previously held by the public. Thus the buying pressure desired by the authorities to push up market prices of medium- and long-term securities (i.e. push down the rates of interest) is manufactured.

It is important to appreciate that this manœuvre is possible only if the banks play their part—which is to absorb the Treasury Bills unloaded by the Public Departments. They have an incentive to do this as long as they can obtain more cash for reserve, since they receive interest on the additional Treasury Bills held. Under the 'ever-open-back-door' system now operating, the Bank of England in fact provides them with as much cash as they require to enable them (consistently with maintaining their 8 per cent. cash ratio) to hold all the Treasury Bills offered. Indeed, the back door is held open on the understanding that the banks will see to it that the Treasury Bills are absorbed. The authorities have also, as a long-stop, the power to call upon the banks to take up more Treasury Deposit Receipts—but the banks would not actually force the authorities to resort to this measure, because they themselves prefer Treasury Bills to Treasury Deposit Receipts.

The process is thus thoroughly reliable, as far as the creation of the buying pressure for medium- and long-term securities is concerned. (The efficacy of this buying pressure in causing a fall in interest rates is another part of the story, to which we shall return presently.) It depends upon (1) the willingness and ability of the authorities to lengthen the average life of securities held by the Public Departments, &c.; (2) the willingness of the banks to expand their Treasury Bill holdings provided they are allowed more cash; and (3) the willingness of the Bank of England to create more cash for the banks without raising the short-term money rates.

The process will perhaps be more readily understood if it is set out in balance-sheet terms on the same schematic plan as has been used in earlier chapters. In the following

paragraphs and tables, the figures used are not quite the actual figures of the 1946–7 episode, but are simplified figures, based on the real ones and not so very different from them. The use of imaginary figures is designed partly to ease the reader's arithmetic, but partly also to avoid the complications due to (*a*) the former practice of 'window-dressing' the banks' cash ratios, and (*b*) the simultaneous operation of other factors such as the rise in the demand for ordinary bank Advances. We have, in any case, no precise information of the changes in securities held by the Public Departments. So the following figures must be regarded as imaginary, though not very far from being a picture of what actually happened during the fifteen months November 1945–February 1947.

POSITION I

Bank of England

£ millions

Note and Deposit Liabilities		Government Securities	500
to Commercial Banks	400		
Public Accounts	100		
	500		500

Commercial Banks

Deposits	5,000	Cash in hand and at the Bank of England	400
		Money at Call, Bills Discounted and T.D.R.s	2,200
		Other Assets	2,400
	5,000		5,000

Public Departments[1]

Treasury Bills	2,000
Medium- and Long-term Securities	2,000
	4,000

Then we will suppose that the Public Departments buy medium- and long-term government securities to the

[1] I should emphasize again that these imaginary figures for the Public Departments, unlike those for the banks, have no factual foundation.

amount of £500 millions, and that the banks are expected to take up the Treasury Bills sold by the Public Departments. The public have to be paid by drafts on Public Accounts at the Bank of England, and these Public Accounts are replenished by the sale of Treasury Bills to the commercial banks. Then we may imagine, as an immediate impact result of the transactions of the Public Departments:

POSITION II.

Bank of England

£ millions

Note and Deposit Liabilities to Banks:		Government Securities	500
400+500(*a*)−500(*b*) =	400		
Public Accounts:			
100−500(*a*)+500(*b*) =	100		
	500		500

Commercial Banks

Deposits:		Cash, &c.:	
5,000+500(*a*) =	5,500	400+500(*a*)−500(*b*) =	400
		Money at Call, Bills, and T.D.R.s:	
		2,200+500(*b*) =	2,700
		Other Assets . . .	2,400
	5,500		5,500

Public Departments

Treasury Bills 2,000−500(*b*).	1,500
Medium- and Long-term Securities 2,000+500(*a*).	2,500
	4,000

Notes

1. Changes marked (*a*) arise as Public Departments buy from the public securities to amount £500m., paying by cheque on Public Accounts at Bank of England, which cheques are credited by the banks to their customers, and used to increase their own balances at the Bank of England.

2. Changes marked (*b*) arise as the Public Departments sell Treasury Bills to the commercial banks, which pay for them by cheque on their balances at the Bank of England, these cheques being credited by the Bank of England to Public Accounts.

3. The cash ratio of the commercial banks in Position II is about 7¼ per cent.

The commercial banks now have to rebuild their cash ratio to 8 per cent. They can do this by unloading on to the Bank of England part of their very large holding of Treasury Bills, either directly or by calling loans from the Discount Houses who in turn have to unload Treasury Bills on to the Bank of England, through the ever open back door. In either case we can summarize the resulting position thus:

POSITION III

Bank of England

£ millions

Note and Deposit Liabilities: 400+40(*c*) =	440	Government Securities: 500+40(*d*) =	540
Public Accounts . .	100		
	540		540

Commercial Banks

Deposits. . . .	5,500	Cash, &c.: 400+40(*c*) =	440
		Money at Call, T. Bills, and T.D.R.s: 2,700−40(*d*) =	2,660
		Other assets . . .	2,400
	5,500		5,500

Public Departments

(as in Position II)

Notes on figures in Position III.

(*c*) Denotes a change due to payment by the Bank of England to the commercial banks for Treasury Bills passed into the former through the open back door.

(*d*) Denotes transfer of Treasury Bills from the commercial banks (or Discount Houses who thereby are enabled to pay off Money at Call) to the Bank of England.

Thus in effect the £500m. of Treasury Bills unloaded by the Public Departments has been taken up as to £460m. by the commercial banks and as to £40m. by the Bank of England—this proportion of 92 to 8 reflecting the commercial banks' requirement to hold 8 per cent. in cash and 92

per cent. in earning assets against the additional £500m. of bank deposits acquired by the general public as the latter unloads its securities on to the Public Departments.

Fundamentally the depression in interest rates is dependent on the willingness of the banking system to create additional money, and this (given the 8 per cent. cash ratio) implies willingness of the Bank of England to create additional cash. But as the increased supply of liquidity (money) by the banks is, in accordance with their principle of preferring short assets, made only against short assets (additional Treasury Bills), the pressure of the increased liquidity upon long interest rates can become effective only by the intervention of some body willing to transmute the short loans offered by the banks into a pressure of long-term loans, so relieving the public's desire to unload long-term securities as their yields fall. As rates of interest fall, the public (being sceptical of continuance of the fall) 'go short'—they exchange securities for cash. Someone must 'go long' in order to absorb the securities offered. The banks will create more money, but they are not willing to 'go long' enough.[1] The Public Departments step into the breach, and 'go longer' by replacing Treasury Bill holdings by medium-term and long-term securities.

A closer study of Positions I and III above will reveal that the operation results in a higher percentage of money-market assets among the total assets of the commercial banks—for the entire increase in assets is in cash and money-market assets. As Treasury Bills are exchangeable for cash on demand at the Bank of England's ever open back door, this rise in Treasury Bills will not nowadays

[1] To some extent the Treasury can enlist the aid of the banks by shortening the outstanding Debt. As long-term bonds neared maturity (and so became money-market assets) the Treasury did not replace them by new issues of long-term bonds suitable for the investing public, but let them mature and then replaced them by new 'shorts' or 'mediums' that the banks would hold. Thus the proportion of long-term debt was reduced, and the dependence of the Treasury on the banks and the discount market was increased.

be resisted by the banks on account of any loss of liquidity. On the other hand, they may think that a small proportion of their increase in resources could safely be invested in long-term securities. To the extent that they do this, the complicated process just described can be short-circuited —the action of the banks in taking the long-term securities offered by the public will reduce the extent to which the Public Departments have to redistribute their resources between Treasury Bills and longer-dated bonds. We might, for instance, arrive at an alternative position, which we shall call III A:

POSITION III A

Bank of England

£ millions

Note and Deposit Liabilities	440	Government Securities	540
Public Accounts	100		
	540		540

Commercial Banks

Deposits	5,500	Cash, &c.	440
		Money at Call, T.B.s and T.D.R.s	2,560
		Other Assets (including long-term Government Securities)	2,500
	5,500		5,500

Public Departments

Treasury Bills	1,600
Medium- and Long-term Securities	2,400
	4,000

Here, because £100m. of the securities on offer by the public (at the prices bid by Public Departments) are taken up by the commercial banks, only £400m. of Treasury Bills have to be replaced in the Public Departments by securities bought from the public. These £400m. are taken up as to £360m. by the commercial banks and £40m. by

the Bank of England—the £m40 being (as in the other case also) the amount of additional cash necessary as a basis for the £m500 addition to the total of bank deposits.

It might be supposed that the commercial banks, pursuing their ordinary liquidity rules, would in fact be prepared, in the way we have just seen, to add somewhat to their holdings of medium-term and long-term securities as their cash and money-market assets expand. On the other hand, the commercial bankers may be infected by the general investing public's scepticism about the future of the rate of interest. If the banks, like the public, think that the prices of government securities are going to fall, they are unlikely to add to their own holdings. They, like the public, will be inclined to 'go short'—i.e. to increase the average liquidity of their asset portfolios. This is the case we have shown in Position III above, where the amounts of cash reserves and money-market assets are increased while other (longer) assets are maintained at the same absolute amounts as in Position I. The banks may indeed go farther in this direction, and themselves unload the longer securities on to the Public Departments, taking up more Treasury Bills in exchange. This, though it increases the necessary lengthening of the Public Departments' assets, does not require further enlargement of the cash basis. This peculiarity arises from the fact that the desire of the commercial banks for greater liquidity is satisfied by the enlargement of their holdings of Treasury Bills, whereas we have supposed that the public's desire for greater liquidity could be satisfied only by additional bank deposits. If the public would be content to hold Treasury Bills, a mere exchange in the portfolio of the Public Departments of long securities for Treasury Bills would meet the case, without any creation of bank deposits.

In general we may say that the public's pressure to hold shorter assets as rates of interest fall must be matched by a corresponding lengthening of the assets held somewhere else in the system or by a 'shortening' of the whole Debt

by substitution of short for long bonds.[1] To the extent that the banking system itself will undertake this 'lengthening' of its assets, the need for any intervention by a special public agency (in this case the 'Public Departments' in their capacity of an investor of funds) is reduced. In the actual historical experience of 1945–7, the Treasury did issue short bonds in replacement of long bonds and the commercial banks did add somewhat (about £200m.) to their 'Investments', in spite of the rising demand for Advances (which rose by over £100m.). The banks were encouraged to do this by the great inflation of their liquid assets caused by the operations of the Public Departments; and to the extent that this increase in bank 'Investments' occurred, the need for the Public Departments to take up medium-term and long-term securities was reduced.[2]

III. *The Failure of Intervention*

When such large resources were at the disposal of the authorities and when they were supported in some measure by the commercial banks (despite the danger of infection of bankers by the public scepticism), why did the 'ultra-cheap money drive' of 1945–7 fail? For fail it did—in the first months of 1947 the long-term and medium-term rates began to creep upward again, the long-term rate passing 3 per cent. before the end of the year. Fundamentally the failure was due to the market's conviction, backed by very large-scale willingness to exchange securities for money, that $2\frac{1}{2}$ per cent. was, in the circumstances of high demand

[1] See above, p. 213, n. 1.

[2] It might be supposed that the Government could assure itself of the maximum support from the banks by exercising its powers to issue Directions under the Bank of England Act (1946), calling upon the banks to increase their Investments *pari passu* with their liquid assets. But this legislation was passed only towards the close of the period in question, and even at a later date it would have been difficult for the Government to force the commercial banks to take a step that they might believe (if they shared the public expectation of falling security prices) would involve them in very heavy capital losses.

for real capital investment and scarcity of resources, an unnaturally low rate that could not be expected to last.

It was, of course, obvious that, in the prevailing economic circumstances, even 3 per cent. was an unnaturally low rate, defended only by the stringent physical controls of capital investment. But 3 per cent. had, after all, been held for years, and it was the attempt, the patently juggling attempt, to press it down yet farther, flying in the face of basic conditions, that the market found so difficult to swallow. The distrust felt by the weighty investing institutions and by other important operators (who were most influential in formulating the market demand schedule for government securities) was perhaps heightened by the tone of the propaganda speeches of the then Chancellor of the Exchequer. At any rate, the demand curve for money (in exchange for fixed interest securities) proved both flat and unstable.[1]

The instability of the position to which the authorities drove the securities market in 1946–7 is due to the influence of speculation. This has been explained by Professor F. W. Paish in the following passage taken from his article on 'Cheap Money Policy':[2]

> So long as interest rates are falling and prices of securities are rising, the movement will be assisted by those who hope for capital profits from its continuation. The incentive to look to capital profits rather than to income is increased by high rates of taxation on incomes without corresponding taxes on capital profits. This incentive reaches almost absurd levels in the case of the very rich man paying surtax at maximum rate, for whom sixpennyworth of capital appreciation is worth a pound of gross income. But as soon as the rise is checked, and security prices look as if they are more likely to fall than to rise farther, speculation works in the opposite direction. When interest rates are low, it takes several years even of gross income to make up for the capital loss due to a small rise

[1] This paragraph is reproduced from my article, 'Central Banking in the Light of recent British and American Experience', in the *Quarterly Journal of Economics*, May 1949.

[2] See *Economica*, Aug. 1947, pp. 169–70.

in interest rates, while with high rates of tax the number of years of net income lost by capital depreciation will be very much larger. If we take a 2½ per cent. rate for irredeemable securities, and ½ per cent. as the gross rate obtainable on deposit account at a bank, the difference in annual net yield, with income tax at 9*s.* in the pound, is only £1 2*s.* 0*d.* The capital loss from a rise of only ¼ per cent. in the rate of interest from 2½ per cent. to 2¾ per cent. is just over £9. Thus even this small rise in the rate of interest would wipe out the whole of the net yield on the securities for over eight years, and if an investor expected a rise in interest rates of even this magnitude within the next eight years it would pay him better to keep his money on deposit at a bank. For a very wealthy man, paying the maximum rate of surtax on part of his income, the net yield is only 1*s.* 3*d.* per £100, or 1*s.* per £100 more than on bank deposit. At this rate it would take him over 180 years to make good the capital loss due to a rise of ¼ per cent. in the rate of interest. Thus a surtax payer cannot afford to take the risk of capital depreciation unless it is balanced by an at least equal chance of appreciation. The result of this is that as soon as a further fall in interest rates becomes unlikely, surtax payers and, to a somewhat smaller extent, income tax payers, must take their profits, even if it means getting only ½ per cent. interest on bank deposit for years together. Thus a high level of security prices, reached with the help of speculative purchases, may prove very difficult to consolidate once the rise ceases.

Under this influence, once the top of the market seemed to have been reached, it began to wobble, and the authorities had to pump more and more deposits into the system in exchange for securities unloaded by the public on to the Public Departments. The amount of new money ran into figures that became alarmingly high—£900 millions, a 20 per cent. addition to the previous total of deposits, in little more than a year. The authorities then very properly got cold feet. Given market sentiment, creation of bank deposits on an enormous scale would have been necessary for holding the 2½ per cent. line; and the only alternative was retreat. Support was withdrawn and the long-term rate slipped back to 3 per cent. and beyond.

The failure of this attempt and the fact that large official funds had been secretly manipulated in the course of it have led people to suppose that there was something peculiarly artificial, even something nefarious, about any such operation. We should hesitate to jump to this conclusion. After all, it has long been considered the duty of the monetary authorities to manipulate the short-term rate of interest by manipulating the liquidity distribution of assets available to the banking system and the public: this is the very essence of the traditional 'open market operations' of a central bank. The Federal Reserve System has for many years made it its business to operate not only in the short market but also in the long market, and has effectively pegged the prices of the long-term bonds. The Macmillan Committee of 1929–31 recommended[1] that the Bank of England should operate, upon occasion, in the long-term market as well as in the short-term market. The fact that there is in the funds of the 'Public Departments' a *masse de manœuvre* far exceeding that in the Bank of England alone should be hailed as affording to the authorities an opportunity for carrying out the spirit of the Macmillan Committee's intentions.[2]

If, then, the authorities were using a perfectly respectable weapon in 1945–7, why was the incident the occasion

[1] *Report of the Committee of Finance and Industry* (Cmd. 3897 of 1931), p. 154 (paragraph 359).

[2] In an article, 'Central Banking in the light of recent British and American experience' in the *Quarterly Journal of Economics*, May 1949, in commenting on the 1946–7 episode, I suggested that, for controlling the bond rate 'something could be done by active co-operation between some of the great institutional buyers of gilt-edged securities' (p. 206). I was, indeed, thinking of steadying the market, as it was steadied by the government broker in Nov. 1949, though I did not make this limited reference clear. But even in this limited way my suggestion was thoroughly unsound, as was pointed out to me by Mr. G. S. Dorrance. By concerted action the great private investing institutions might constitute themselves a kind of major-domo in the Bank of England's kingdom; and any derogation from the power of the central bank would be anathema to me and to all those who with me believe that positive central direction of the monetary machine is desirable.

of so much critical comment? The answer to this question is closely linked with the explanation of the failure of the attempt. There is much to be said for official intervention to push long-term interest rates downward when lower interest rates are wanted for the sake of stimulating economic activity while inertia in the capital market is making a natural fall too sluggish. This was clearly the kind of situation envisaged by the Macmillan Committee. The conditions of 1945–7 were directly contrasting with those just described. It was not the case, in 1945–7, that the authorities were hastening a fall in interest rates that would have come anyway; and the conviction that official policy was inconsistent with the underlying economic forces was responsible for the huge creation of money in an attempt that in the end had to fail or bring the whole monetary system into disrepute. But things need not always be thus; and the perversity of the British authorities on this notorious occasion should not lead us to condemn for all time the use of the important mechanism that has been explained in this chapter.

9

COMMERCIAL BANK ASSETS AND EARNING CAPACITY

1. *Economic Significance of the Distribution of Assets*

THE alleged powerlessness of bankers to influence the general economic situation has sometimes been formulated in statements of this kind: 'The banking system determines the aggregate of bank money in existence, but the public alone decides the use to which that money shall be put.' We have already seen in Chapter 1 that this sentence is internally inconsistent, for, given the relative unattractiveness of a money balance, control over the supply of money implies influence over the spending of money. In previous chapters we have seen how the banking system derives from its control of money supplies some influence over rates of interest, and how this in turn gives it some influence over the spending of money. This same proposition may be put in another way, by saying that the banks can initiate a change in the economic situation when they exchange assets with the public—giving bank deposits and receiving assets such as cash, bills of exchange, government securities, business men's promises to repay, and so forth. At any moment the public prefers to distribute its stock of wealth between different classes of assets in one particular way rather than any other way.[1] If the banks change that distribution of assets, by causing the public to hold more bank money and less of certain other classes of assets, that change must inevitably force repercussions on the entire economic situation.[2] The general nature of these repercussions has been analysed in Chapter 6. We there assumed that the

[1] The relations between various parts of the structure of interest rates depend on the public's scale of preferences for particular classes of assets.

[2] This follows from general equilibrium analysis of the Pareto type.

methods of commercial banks were more or less those of present-day England. But the current English system need not be considered a model from which all other possible systems are more or less despicable deviations! And in any case we must, if we are to understand how far the analysis of the above-mentioned repercussions depends on certain banking methods, look further into the details of commercial banking methods. The initial form at least of the repercussions following a redistribution of assets obviously depends on the particular classes of assets which the banks choose to take in exchange for bank deposits. What is the basis of the commercial banks' scales of preferences for different classes of assets? How far are those preferences open to modification? What influence do they have on the efficacy of central banking? What are the implications for the future of commercial banking?

II. *The 'Liquidity' of Bankers' Assets*

The ultimate object of a commercial bank is to make profits for its shareholders. The profit is derived from the income attached to the assets it is enabled to hold by the public's being willing to hold the bank's debts (deposits) as money balances. The profits are greater the higher the yields of the assets it holds. They can quickly be turned into losses if the capital value of the assets falls. The possibility of earning profits at all depends absolutely on the public's acceptance of the bank's debts. There must be 'confidence' in the bank. The public accepts the bank deposit as being 'as good as cash'. Public confidence in the bank depends therefore on the belief that the bank will always be able to exchange deposits for cash on demand. Power to offer cash in exchange for deposits is therefore a prerequisite of the profits which a commercial bank is seeking.

'Liquidity' is the word that the banker uses to describe his ability to satisfy demands for cash in exchange for deposits. To earn profits at all the banker must maintain

confidence. To maintain confidence he must maintain an adequate degree of liquidity in his assets. The perfectly liquid asset is, of course, cash itself. The more cash a banker holds the more obviously can he, without any difficulty of any kind, offer cash in exchange for deposits. But cash is an 'idle asset'—it earns no income at all. To make a profit the banker must hold some assets which are imperfectly liquid.[1] What should be the nature (other than income-earning) of the imperfectly liquid assets of a bank? The answers which bankers have given to this question have generally left an ambiguity about the word 'liquidity', an ambiguity that has its root in the banking conditions of earlier days. To satisfy depositors' claims a bank must be able to convert its assets into cash *quickly*. But that is not all. If the depositors' claims are to be fully satisfied the bankers' assets must be convertible into cash *without loss*. When bankers have said that they aim at liquidity they have generally included *both* these attributes.

The ambiguity is realized at once when we ask whether long-term British Government securities are highly liquid or relatively illiquid assets. The uncertainty of bankers' treatments of this question has its origin in the ambiguity of their use of the term 'liquidity'. The securities can be turned into cash very quickly, for there is an excellent market for them on the London Stock Exchange. That is to say, these particular assets are readily shiftable on to other banks or institutions or persons willing to supply cash. But the amount of cash which can be so obtained depends upon the market price at the moment—it may be more or less than the price at which the bank acquired the asset. Only by waiting until the distant maturity date can the face value certainly be obtained. This asset is attractive to the banker in that it is shiftable and, if he can wait

[1] There is the possibility that a State institution can perform the business of creating a readily transferable asset for public use in settling debts, meeting the cost by charging individuals a commission on the amount they draw.

until the maturity date, devoid of risk of loss. But it is unattractive in that earlier realization may involve the banker in a capital loss. It is well-nigh perfectly 'shiftable', but despite the absence of any risk of the British Government's not meeting its obligations the security has not all the qualities which the banker includes in perfect liquidity.

The distinction between shiftability and the second attribute of liquidity may be further illustrated by reference to the ordinary shares of an outstanding industrial company—say Imperial Chemical Industries. A bank which chose to hold such shares could turn them into cash very quickly by selling them through the Stock Exchange where those shares enjoy a wide market. But there would be all sorts of risk of loss attached to those securities and, despite their very high degree of shiftability, the banker would probably describe them as illiquid. Contrast the example of a bank (or individual) lending to a traveller going to Tibet or to explore the Desert of Gobi. The lender may well know the traveller to be an honest man who will make a point of paying his debts when he returns. The debt may be well covered by assurance of the traveller's life, the policy being held by the creditor. There may thus be practically no risk of loss attached to the loan—but a bank may well hesitate to offer a bank deposit in exchange for the traveller's promise to repay. For it would be very difficult to arrange for some other institution to take over, in exchange for cash, the bank's claims against the traveller while the latter was in the middle of the Desert of Gobi. The asset would be shiftable only with great difficulty, and, despite the virtual absence of risk, the banker would describe the asset (the traveller's promise to repay) as illiquid. Many bank loans to business men are probably more or less like this: the bank managers know that the firm's assets amply cover the amount of the loan, and that the firm is an honest one, but the informality with which the loan has been arranged between banker and customer makes it shiftable only at considerable inconvenience. To

many other business loans serious risks of loss are also attached. The banker rightly ranks his loans on overdraft arrangements among his least liquid assets.

The astute reader will have noticed, particularly in the discussion of the example of British Government securities, that shiftability and low risk of loss as the two elements which constitute the banker's liquidity are not completely disentangled. *If the banker can wait until maturity* there is no risk attached to a redeemable British Government bond. If, therefore, the banker has a fair proportion against deposits of assets that have high shiftability and low immediate risk (cash being the extreme case), he can feel reasonably secure in holding some assets which are highly shiftable but only riskless if not shifted. Similarly, if he has a fair proportion of the most liquid assets, he can afford to hold some assets that have a low risk degree but also low shiftability. Assets that are both unshiftable and risky will be viewed with much more disfavour. The banker must, that is to say, pay regard to both aspects of liquidity at once. He should always have some assets that have both attributes clearly. In addition he should have some assets with a high degree of shiftability which involve no risk of loss if shifting can be avoided. His remaining (less shiftable) assets should at least not involve him in losses. These are among the fundamental canons of sound commercial banking.

We must now look more closely into this matter of 'shiftability'. One particular commercial bank can look upon some of its assets as readily shiftable on to other banks or non-bankers willing to diminish their balances. For the purpose of meeting temporary adverse Clearing House balances or for meeting a run which is, for domestic reasons, restricted to one bank this shiftability is adequate. But a much more dangerous situation may arise. The demand for cash in exchange for bank deposits may not be confined to one bank. Indeed, if a crisis arises it is unlikely that a run will be restricted to a single bank. The

more consolidated the commercial banking structure the more likely is the demand for cash to be generalized. In America the correspondent connexion between unit banks is apt to be a channel through which shocks to one bank can pass to many other banks. In a country where the business is all in the hands of a few great banks serious disturbance of one of those banks is bound to cause such a disturbance of the entire economy as to spread the difficulties to other banks. Such considerations as these make it imperative to think of shiftability very much in terms of shiftability on to the central bank—the lender of last resort, the ultimate source of cash. In judging the shiftability of any asset regard must be had primarily to shiftability (either direct or indirect) on to the central bank. The eligibility canons (the rules by which the acceptability of assets is determined) of the central bank are therefore of vital importance to the liquidity of the commercial banking system.

Maximum shiftability is attained by assets that can be most readily shifted on to the central bank. This depends entirely on the eligibility rules of the central bank. Generally speaking central banks will give cash on demand for Treasury Bills and bills of exchange fulfilling certain conditions. Why these happen to be the typical eligibility rules of central banks we shall discuss in the next section. We may simply add here that since the implications of central banking have been fully understood there has been a disposition to extend eligibility to other classes of assets. Any such extensions are subject, however, to obstacles not placed in the way of the rediscounting method of obtaining cash. Treasury Bills and bills of exchange which meet central bank requirements are therefore *generally* the most 'liquid' earning assets; but not in London. The rediscountability of a bill makes it very attractive for its shiftability; but the length of its life—typically three months—implies risk of a small loss. For if the bill is rediscounted at a higher rate of interest (discount) than that at which the commer-

cial bank took it, there may be a capital loss.[1] The shorter the life of the bill the smaller is the loss that may be involved in rediscounting. Hence the preference of banks for short-dated bills. The 'eligible' bill is a highly shiftable asset, and becomes less risky as it approaches maturity. London, with its highly developed discount market and its system of indirect contact between the central bank and the commercial banks, has been able to provide the banker with an even more liquid asset. The call and short loans to the discount houses have the shiftability advantages of bills of exchange because the Bank of England is always ready to give the discount houses cash in exchange for the eligible bills which the commercial banks expect to be deposited as collateral security for their loans to the discount houses.[2] But if the banks want to obtain cash they can call in these loans and secure *the full sum originally lent*, with interest at the pre-arranged rate. There is no risk of loss. In London, therefore, the Money at Call and Short Notice, in so far as it is covered by eligible paper deposited by the discount houses, stands next to cash in order of liquidity. After that, and immediately after cash in other banking systems, come Treasury Bills and bills of exchange in order of their nearness to maturity. The very slight risk there is of wholesale default by all the other names on an eligible bill of exchange is the only reason for placing Treasury Bills before ordinary bills of the same maturity. No other assets are so shiftable. Wherever there is a well-developed central banking system banks are apt to consider their proportion to deposits of these highly liquid assets as almost as important as their cash ratios and their readiness to expand on the basis of increased cash may be checked by a scarcity of these assets.

[1] As explained on p. 52 above.

[2] The banks have become accustomed to lending to the discount houses on the security of non-eligible paper (such as government bonds having a year or so to run); but the lower liquidity of loans against such security has been reflected in higher rates of interest charged on them ($\frac{3}{4}$ per cent. or 1 per cent., against $\frac{1}{2}$ per cent. for loans secured by eligible paper).

III. *The Attractions of Self-liquidating Paper*

But so far we have, in a sense, evaded the issue. We have said, in effect, that commercial banks have a certain preference for those assets which the central bank prefers. To understand the problem thoroughly we must ask why the central bank has historically preferred assets of certain types, and the superficial answer unfortunately seems to take us round the circle again. Whether we look at the United States, which to some extent viewed the problem independently, or at England, or at the many countries which have simply followed American or English practice, the ultimate answer to our historical question is that central banks have, in order to protect themselves against loss and to discourage bad banking, preferred 'sound banking assets'. The ultimate reason for bills of exchange (and derivatively loans to reputable houses collaterally secured by bills) being considered 'sound banking assets' still eludes us.

We have only to glance at the literature of banking to find the banker's own explanation of the bill of exchange constituting 'a sound banking asset'. The bill of exchange, says the banker, is the ideal *self-liquidating paper*. The kind of bill a banker likes has its origin in an actual commercial transaction—say the export of Australian wheat to England—which will bring money into the hands of the debtor automatically at the end of a very short period of, say, three months. The banker simply has to sit back in his parlour for that very short time while the wheat is coming across to England, and the debtor will meet his bill without the slightest difficulty, provided, of course, that the debtor is an honest man—and the banker looks for reputable names on the bill to guarantee that he will receive in due course *the money that is bound to emanate from the conclusion of the transaction.* The banker has his theory of self-liquidating paper in mind not only when he is taking bills of exchange but also when he is making advances to

business men—a loan for the purchase of raw materials needed to meet an order for the business man's product is normally more attractive to the banker than is a loan to an undergraduate to enable the latter to complete his university course. The great difference between the bill of exchange and the informal commercial loan is that in the former case there is, and in the latter case there is not, a negotiable legal instrument that greatly facilitates the shifting of the loan. And if we want to know why the bill method is used in one case more than in another the answer is that bankers have devised the negotiable legal instrument to increase the marketability of those assets which, by reason of bankers' taste for their 'self-liquidating' nature, already have most chance of finding a market. The existence of a legal instrument called a bill of exchange is not the hall-mark of the self-liquidating asset.

A self-liquidating loan is thus one which the debtor is thought sure to be able to repay, because there is evidence (often in the shape of warehouse receipts held by one of the parties) that he is engaged in a genuine commercial operation, closure of which will provide him with the wherewithal for repayment. But, to revert to our example of the Australian wheat exporter, will the closure of the transaction—the sale of the wheat in England—necessarily enable the debtor to repay? That depends on the price the wheat realizes. The loan arrangement will generally, by keeping the amount of the bill below the expected sale value of the wheat, allow some margin to cover a slight unforeseen fall in wheat prices. If, however, there is a catastrophic fall in wheat prices before the cargo of Australian wheat comes on the market, the transaction itself provides no guarantee of the debtor's ability to meet the bill on maturity.[1] And what generally prevents such a

[1] I ignore, for the sake of simplicity, the complicating fact that the merchant will probably have 'hedged'. Readers familiar with the process will realize that my conclusion is unaffected if the appropriate complications are introduced.

catastrophic fall of prices? The maintenance of the supply of money. If bankers, in a misguided attempt to 'liquidate' their assets, refuse to take up any new bills and do simply sit back in their parlours and wait for the maturities of the bills in their portfolios, there is a catastrophic fall in the supply of purchasing-power and the catastrophic fall in prices which makes it impossible for debtors to meet bills out of the proceeds of their operations. Only by *maintaining* their assets can banks *maintain* the 'self-liquidating' character of a substantial class of them. The banks are for the most part important direct lenders in the short-term capital market, and the availability of means to pay off maturing short-term debts depends essentially on the banks' readiness to make new short-term loans. The certainty there appears to be that holding a bill will not involve a bank in loss if only the bill is held to maturity depends on the assumption that the banking system as a whole will not be contracting credit. Hence the widespread ruin of even the 'soundest' of institutions if a crisis is allowed to go unchecked. On the other hand, it is within the power of the banks themselves to ensure that bills will be met at maturity (always provided the various signatories are honest).

It might at first glance be supposed that the same argument should be applied to the market for long-term securities and that these could by the action of the banks themselves in always supporting the market, be made equally attractive as liquid assets. Against this there are two substantial objections. First, the central bank may want interest rates to rise, and in pursuit of this aim the central bank will have to keep the cash basis small enough to deter the commercial banks from supporting the gilt-edged market. A rise in the long-term rate of interest implies a much greater fall in the market prices of securities than a rise in short rates causes in the capital value of short-term bills. Consequently, the banks have always to face the possibility that their balance-sheet position will be vulnerable if they

hold a large proportion of long-term securities, no matter how 'safe' these securities are in the sense of certainty of full repayment at maturity.[1]

Secondly, even if there were assurance of stability in long-term interest rates, there remains an objection to long-term financing of industrial and commercial activity. Traditionally bankers, as providers of short-term capital for traders, have been accustomed to consider primarily a borrower's honesty and good faith *and his balance-sheet position*. If the honest borrower has a reasonably liquid position—if he has stocks of marketable raw material and finished products, and goods in process that will emerge as marketable finished products fairly soon—he can be counted upon to repay a temporary advance. A provider of long-term capital, on the other hand, is concerned not so much with the balance-sheet position as with the *long-term earning capacity* of the borrower. Assessment of earning capacity is a task very different from assessment of the current balance-sheet position. It calls for a long view of markets, both for raw materials and for products, of technical possibilities, of labour supplies, and of the likelihood that the firm will maintain an adequate level of managerial competence. Assessment of all these factors can be reasonably undertaken only by large groups of specialists, each one specializing in one or a few industries. The traditional bank manager is not qualified for such 'industrial consultant' work. Ability and training of one kind are required to judge whether A, B, C, &c., will be solvent in three months' time: quite other abilities and experience are required before a man can judge whether A (let alone B, C, &c.) will be solvent in twenty years' time.

[1] If the central bank appears, over a sufficiently long period, to be firmly attached to a policy of stable interest rates, the force of this objection is weakened and bankers become willing to enlarge their proportion of long-term securities. This was at least beginning to happen in the U.S.A. after 1945, when in deference to Treasury ideas the Federal Reserve System itself supported the long-term securities market at fixed prices.

It is this distinction that lies behind the traditional view that a banker should make only 'self-liquidating' loans, and the discredit into which the naïve theory of self-liquidating loans has rightly fallen does not justify forgetfulness of the important truths that lie behind it. Now that full understanding of central banking has made all assets ultimately shiftable on to the central bank, bankers must not imagine that all assets are 'liquid'. The loss-avoiding aspect has to be remembered, as well as the shiftability aspect of liquidity. If losses are to be avoided, the risks taken should not fall outside the practicable range of the bank manager's judgement.

IV. *Some International Comparisons*

Ideas about what constitutes 'sound' banking—the ideas analysed in the previous section—have grown up mainly in England during the last two hundred years, but the basic principles are to be found all over the world. This fundamental common element in all banking systems has not, however, brought about uniformity in the assets-structures of the commercial banks in different countries, and in this section we must consider some of the differences that mask the fundamental similarity of attitude.

International differences in the assets-structure of commercial banks depend on two factors: the structure of the rest of the capital market and the extent to which classical notions of good banking have penetrated each country. Of these two factors the former is nowadays much the most important. England has never had a monopoly of sound banking ideas,[1] and in the more backward countries the penetration of the great international banks has helped to spread classical banking thought. The non-availability of assets of particular kinds and the pressure of business interests for assistance unobtainable elsewhere have in general been responsible for the main divergences of other

[1] Indeed, it may well be argued that such ideas were imported from Scotland.

commercial banks' distribution of assets from those typical in England. To take the clearest example, Money at Call and Short Notice in England consists largely of loans to the discount houses—highly liquid loans, almost as good as cash. But the great majority of countries have no discount market whatever. The most attractive type of banking asset is simply unobtainable. 'Call Money' is important in some other centres (New York and Montreal for example), but it is almost exclusively loans to the stock dealers—loans that cannot ordinarily be shifted on to the central bank. Government bonds are generally nowadays available in amounts large enough to meet any bank's conceivable requirements; but a South American bank may well feel disinclined to hold a large block of the bonds issued under a constitution that may be suspended next week! Such a bank can, it is true, hold the bonds of some other government that can be relied upon to meet its obligations, but the investing bank then has to take the risk that the foreign exchange rates may move against it. Just as loans to the discount market are larger in England than anywhere else, so holdings of government securities are apt to be small in South American Banks and large in Indian Banks. The financial record of a country's government is, of course, not the only factor influencing the banks' willingness to hold government securities—in Australia, for example, the abundance of other outlets for their funds is such that the banks hold even less of government securities than do some banks of the unstable South American states.

Given that he is adequately provided with the most liquid assets—above all cash—there is one general class of assets universally sought by bankers. This consists of the loans to business men, made either under an overdraft arrangement or by the discounting of a bill of exchange. In London, and to a less extent in some other centres, the bill of exchange often receives the signature of some specialist institution which makes itself responsible for the debtor's solvency. But more generally the bill of exchange

method approaches the ordinary advances method. Which type of arrangement predominates is apt to be the outcome of historical accident; but the development of central banking has tended to encourage the bill of exchange method, as it provides a legal instrument which can be more readily transferred than the somewhat informal bank advance. The bank advance has one great attraction for the banker: it is more profitable than any other asset. This higher yield is due to the fact that the personal risks attached to such loans make them an unattractive investment for people who have not the facilities of bankers for investigating the credit-worthiness of borrowers. The loans have, as we have seen, certain disadvantages also for the banks; but the higher return compensates the banks for the relatively low liquidity and the risks involved. Within limits, therefore, the banker rejoices in a business man's demand for a loan. The bigger the outlet for such loans the smaller in general will be the proportion which a bank's other assets bear to the total. Opportunity for taking up these attractive assets may even induce the banks to lower their normal cash ratio (i.e. expand total assets when the cash has not expanded).

A high-class bill of exchange can normally be discounted at rates much lower than those charged on bank advances. This difference reflects the greater security given to the bill by the signature of an acceptor of high standing and by any other signatures which the bill bears. The acceptor bears the immediate risk of the debtor's defaulting. His, therefore, is the work of sifting the creditworthiness of debtors, a function performed by the bank when it is making ordinary advances. Despite the lower yield, banks choose to hold some bills because of their great shiftability. Bills also yield on the average less than medium- and long-term government securities, while the latter yield less than the ordinary bank advances.

The broad classification of commercial bank assets into cash, bills discounted, advances, and investments (mainly

government securities) is practically universal. All banks have to hold some cash; they choose to hold some bills because their great shiftability compensates for the low yield; the high yield of advances attracts the bankers; and investments give a very safe core to those earning assets that can be left undisturbed for years at a time. Apart from the varying distribution of these assets from country to country, which we have discussed above, the most important difference has been in the demands which bankers have been prepared to meet by making advances. Traditionally the English banks have been willing to meet business men's demands for advances only if the latter have been required to finance working capital—purchase of raw materials, wage-bills on long contracts, &c. The English bankers have always had in mind the question: Is the money needed for a 'self-liquidating' transaction? Accordingly they have been inclined to frown upon demands for the financing of fixed capital—factory extensions, new machinery, &c. Their rules against financing fixed capital may be relaxed temporarily when a firm wants accommodation only until it has been able to obtain long-term capital from some other source.[1] Certain banks have also from time to time become notoriously interested in the fixed capital of industry (e.g. the cotton industry in the inter-war period); but this has been the result of being unduly generous in providing temporary finance at the top of a boom—it has not indicated any deliberate change of policy. The general presumption against lending for long-term purposes has been based on the theory of self-liquidating paper discussed earlier in this chapter. It has perhaps been unfortunate that the banking canons have been formulated in such a way that emphasis has been

[1] For example, in the inter-war period some of the Southern Railway electrification schemes were initially financed by bank advances, the latter being paid off as soon as opportunity to issue new debenture stock arose. Similarly, since 1945, industrial re-equipment has sometimes been financed temporarily by bank advances, pending issue of shares or debentures.

placed on the period of the transaction rather than on the basic fear of incurring losses. The idea that a short loan was necessarily a safe loan and that it could not encourage such inflationary development as would inevitably result in a crash[1] did sometimes close the eyes of bankers to the risks they were running. Hence the accidental interests of the banks in the fixed capital of collapsing industries.

There are some signs that the rules by which English bankers judge the attractiveness of loans have been modified somewhat. There is still no general disposition to involve a bank in the permanent financing of the fixed capital of industry; but bankers are apparently willing nowadays to make temporary loans for such purposes and for the anticipation of individual incomes if first-rate collateral security can be deposited. Mortgages on real property or life assurance policies are commonly regarded as such security (within limits, of course). A bank that lends a tradesman sufficient to buy a motor-van, the tradesman having deposited as security a life assurance policy the surrender value of which covers the loan, is taking virtually no risk.[2] Title-deeds to real property are of course not quite such attractive collateral, but if the margin between the amount of the loan and the current market value of the property is large the bank may well feel justified in making the loan. Banks may even, in the case of customers whose professional position is known to the bank and whose reputation of creditworthiness is beyond suspicion, make loans for any purpose without requiring any collateral security. No doubt all these things were done in the nineteenth century; but whereas in those days the speeches and books of bankers frowned upon such transactions

[1] The fallacy of this idea has been exposed in various ways: two quite different approaches are those of Robertson's classic passage on the 'Four Crucial Fractions' in his *Money* and Machlup's 'The Liquidity of Short-term Capital' (*Economica*, 1932, p. 271).

[2] Nevertheless, the shrewd banker will consider whether the business extension that occasions the loan is a sensible project for his client to venture upon.

as rather shady banking, the books of today discuss them as perfectly respectable transactions. Any change which focuses the attention of bankers on gauging risks of loss rather than ill-formulated rules of thumb is all to the good.

At the same time the advantage of scrapping the old rule of thumb must not blind us to the fact that the bankers remain subject to the general business atmosphere from day to day. In prosperity they will be human enough to underestimate risks of loss and in depression they will be human enough to overestimate risks of loss. In America in the nineteen-twenties the commercial bankers often involved themselves in heavy losses not because they made loans on real property but because they took for permanent prosperity what proved to be only a passing phase. Against such dangers there are no fool-proof rules for commercial banking.

The tendency for English bankers to recognize the shortcomings of the nineteenth century's golden rules seems unlikely to lead to any such radical change as would approximate English banking to the traditional continental model. Rather the tendency appears to be for continental banking to imitate English. On the Continent the commercial banks have traditionally been more deeply involved in industrial interests than have the English banks. This has been largely the result not of different banking theories but of the different order of events in economic history on the two sides of the Channel. Industrial development on the Continent was often much more rapid—the rise of the large firm was often too rapid for its capital needs to be met in the piecemeal way in which English industry had obtained its long-term capital. Banks were often established with some definite view of mobilizing the savings of the country for the benefit of the new industries which were rising so rapidly.[1] Continental industries generally looked

[1] The contrast between Continental and British connexions between banks and industry can easily be exaggerated: I do not intend the broad contrast drawn above to be taken as a complete picture.

to the banks to provide them not only with working capital but also with fixed capital. Frequently (for example, in Germany) the general plan has been for the banks to provide capital at the outset, then when the firm is well established the banks would issue the stock to the general investing public.[1] In less advanced countries the banks would more often retain a large interest in a company permanently. In France the business of providing the bulk of industrial capital has been in the hands not of the ordinary banks but of specialist institutions which have not all the attributes of ordinary commercial banks.

The continental system has certainly been much more attractive than has the English system to business men. Particularly the rather small industrial units which find it so hard to obtain long-term capital in England have looked with envy on their continental brethren. But when we refuse to accept the theory of self-liquidating paper we need not jump to the conclusion that English bankers should emulate their continental brethren. We must not forget that risk of loss is what the banker should always bear in mind. Long-term interests in particular industrial concerns imply substantial interest in the fortunes of the companies a long while after the initial loans have been made. It is not possible for a banker to have sufficient far-sightedness to avoid great losses once he has involved himself deeply in particular concerns. And it is difficult for a banker to be otherwise than deeply involved unless he restrains himself within some such limits as those set by the English tradition. The experiences of the 'mixed banks' of Europe have accordingly not been at all happy. The last great slump (following 1929) left behind it a weighty legacy of banking losses resulting from industrial losses. Banking losses there would have been anyway; but the authorities rightly took the view that mixed banking did much to increase the risk of severe banking crises, and in

[1] The pre-1945 German system is described in Whale, *Joint-Stock Banking in Germany* (esp. chapter ii).

many countries legislative action afterwards compelled the mixed banks to separate from their work as deposit banks their work as industrial investment trusts. The two functions are now performed by completely independent companies.[1] The success of British banks in withstanding the crisis naturally encouraged this process of 'purifying' deposit banking elsewhere.

Thus, although the application of general notions is bound to vary from country to country and from time to time, the present position is that English banking notions of abhorring deep interests in particular industrial concerns and preferring widespread short-term loans prevail. We may regard as typical the attitude of the banker who, refusing to encourage the foundation of great new industrial plants, sits in his bank parlour and waits for the established and successful man to come along for some temporary loan. The frequent complaint that the great branch banks are less willing than the old private banks to help the small man perhaps has its root in this increasing passivity of the bankers of the world rather than in a contrast between the private banker and the local manager. Our justification of the bankers' passivity suggests that the complaints should not be met by a revolutionary departure from the established English methods—in the direction of earlier continental banking. Rather the gap now left should be filled by new specialist institutions.[2] To some extent such institutions are appearing—the Agricultural Mortgage Bank in this country and the analogous Rural Credit Banks in many other countries are examples. In the nineteen-thirties 'Credit for Industry' and the Banker's Industrial Development Company attempted to meet similar needs in the industrial field. More recently two industrial finance companies, officially sponsored and

[1] The separation of American banks from their security affiliates, though having similar results, proceeded from rather different causes.

[2] The case for the banks embarking on the business of 'industrial banking' is cogently put in A. T. K. Grant's *A Study of the Capital Market in Post-War Britain*, pp. 184–9 and 275–90.

drawing their capital from the established banks, have been undertaking long-term industrial finance of the kind which makes an ordinary banker uneasy. In the United States the tendency has been for banks to spread with their banker 'correspondents' the longer industrial risks, and in such cases they have taken the logical step of developing specialist industrial consultant departments.

v. *Secular Contraction of the Demand for Bank Loans*

In the preceding section we have noticed incidentally the existence of certain secular changes in the distribution of commercial bank assets. Before 1914 there was, for example, a marked downward trend in the investment proportion of the great English banks. Farther back there had been a fall in bills discounted while advances rose. During the present century, and especially since 1920, an important feature of banking statistics has been a downward trend (allowing for the changed value of money) in bank advances. This movement has such far-reaching implications that it calls for some special discussion. It is serious not only in England, but also in the United States and in Canada where it has been very pronounced. Other banking systems are said to be suffering more or less similar experiences. What are the origins of this change? Of one thing we can be certain. Even if we do not agree about the general passivity of commercial bankers, the great profitability of the bank advance is such that we cannot suppose that the bankers are deliberately contracting their loans to business men through many decades in at least some of which bank profits have been rather scarcer than they used to be. Moreover, they themselves are continually protesting that they would be only too glad to lend more if they could find borrowers of the usual calibre. We have already seen how the security canons acknowledged in print by bankers have been widening rather than contracting the field for bank advances. It seems hardly probable that there has

been any such tightening-up of rules as would reduce gross profits more than bad debts are reduced.

The causes must be sought on the other side. What of the demand for bank advances? The demand for bank advances has, I believe, been subject to secular decline for five reasons: industrial integration, the relative decline of industries peculiarly dependent on bank credit, the growth of specialist credit institutions and the development of stock markets, and the increase in cash payments in retail trade. The relative importance of each of the five suggested reasons varies from country to country.

Industrial integration affects the demand for bank loans through the workings of the laws of chance, if nothing else. Industrial firms, like individuals, hold balances to meet contingent divergences between receipts and outgoings. Some of these divergences are orderly, being connected with seasonal movements of one kind and another. Only the smaller of these seasonal divergences will ordinarily give rise to the holding of balances. The less easily foreseen divergences are those which give rise to most of the holding of balances, and their distribution is naturally a chance distribution. The more chance variations are aggregated the less is the aggregate itself likely to vary. The balance held by one big firm is therefore likely to vary relatively less than would the balances of twelve firms each one-twelfth the size of the big firm. It is but a short step from this to the proposition that, given the preference of business men to hold balances rather than overdraw their accounts, the one big firm is likely to use overdraft facilities less than the twelve small firms whose fusion constituted the one big firm. Big business means, on sheer laws of chance, small overdrafts.

There is good reason to suppose that industrial integration tends to reduce overdrafts for another reason. We have mentioned above the fact that seasonal divergences between receipts and payments will give rise to converse variations in balances only if the divergences are relatively

small. A small firm, having to make provision for a seasonal excess of payments over receipts, faces the choice between holding an idle balance over the excess receipts season and overdrawing in the excess payments season. Which it decides to do we cannot decide *a priori*; but some certainly choose to overdraw in the excess payments season. The big firm, on the other hand, does not face this choice of evils. Instead of holding an absolutely barren balance over the excess receipts season it can lend the money out at short-term—by taking up Treasury Bills, or depositing with discount houses for example. Or perhaps it will leave the money as a bank deposit standing in its own name, wringing from the bank exceptionally favourable treatment. It may even invest the money in bonds nearing maturity. The big firm can and the small firm cannot afford to do this because in the costs of investment and disinvestment there are great economies in large transactions. Thanks to its ability to secure some appreciable interest on its temporarily surplus balances, a huge firm like Imperial Chemicals need never contemplate the possibility of overdrawing in an excess payments period. This is avowedly an extreme example; but it serves to emphasize the tendency for use of overdrafts to decline as a result of firms becoming of sufficient size to enjoy economies in investment and disinvestment of short-term funds.[1]

The relative decline of industries peculiarly dependent on bank credit is probably far more important in the United States and Canada than in England. In those countries agriculture has been notoriously dependent, apart from limited government aid, on the banks for a large part of its capital. The public utilities and the manufacturing and

[1] Keynes suggests (*Treatise on Money*, vol. i, p. 42) that the bigger firms make more use of the overdraft. But detailed information available in the United States (used by N. H. Jacoby and R. J. Saulnier, *Business Finance and Banking* (New York, 1947)), shows that in that country the truth is that it is the medium-sized and (most of all) the small firms that use bank advances, and there is good reason for supposing the same to be the case in England.

the mining industries which are nowadays bulking relatively larger in their national economies have never been greatly dependent on bank credit. They have been able to finance themselves largely by tapping the stock markets. The relative decline of agriculture has meant a relative contraction in the bankers' best outlet for loans bearing high rates of interest.

Agricultural outlets for loans have also probably been those most affected by the rise of specialist credit institutions. These institutions—such as agricultural mortgage 'banks'—have arisen frequently with government support specifically to meet needs that the bankers were unwilling to meet. The same applies to specialist finance firms designed to provide medium- and long-term credit for small firms. To the extent that these specialist institutions are meeting needs which were not met before, the banks are, of course, unaffected. But it seems probable that some of the needs they meet were previously met by the banks who would in a grudging spirit make illiquid loans rather than disoblige good customers. To the extent that this is so the banks have, of course, gained in liquidity and perhaps in avoiding bad debts—but at the expense of substantial gross profits.

The development of stock markets has probably had some influence in reducing the industrial demand for bank loans, especially at times of stock exchange boom. A boom in ordinary shares—or common stocks the Americans would say—enables companies to obtain more capital in exchange for a mere prospect of a share in future net profits. This was, of course, always so, but the public appetite for ordinary shares was almost certainly greater in the 1928–9 Wall Street boom than it had ever been before. Under these circumstances it often paid well-known firms requiring more funds temporarily to issue more shares, placing the money on time deposit (which usually yield some interest) in the excess receipts periods. The ease with which capital could be raised in the stock market in

America in the late twenties may well have accounted for much of the simultaneous growth in time deposits and failure of commercial loans to expand to the extent which might have been expected.

Such have been the causes of this disease which appears to threaten advanced banking systems. The immediate consequence is a deterioration of profits, for the bank advance (commercial loan) is the asset which pays the banker at the highest rate. The banks have therefore been gradually forced into a position in which, even in times of booming trade, they always wish to increase their advances, provided they can do so without lowering their security standards. From the point of view of the working of the economic system as a whole, this means that the bankers have become *passive*. They have certain standards, and are *always* willing to lend to borrowers who reach these standards. Trade does not *begin* to decline because bankers contract credit—though it may well be that, once a trade slump has begun, bankers aggravate the decline (as they did in the U.S.A. after 1929) by trying to curtail loans that had become more risky as a result of trade recession. Given this chronic lack of fullness in the banks' advances, the trouble does not begin with the commercial banks, and it is no coincidence that we do not nowadays often hear the banker cast as the villain of the piece.

Another important result of the bankers' new position is that the internal organization of the banks is determined, to an important extent, by the concern the bank must feel over any refusal to make an advance. The selection of branch managers, the discretion given to them, the relation between branch manager and head office, the extent of reference by general managers to directors, are all substantially influenced by the fact that, while the making of an advance is an action to be carefully weighed by a sensible and experienced man, the refusal of an advance is a very serious step indeed, to be taken only with the support of quite high authority.

VI. *The Problem of Earning Capacity*

The decline in demand for the major banking service has undoubtedly tended to keep a sharp edge on the competition between English banks which, being few in number, might otherwise have slipped into the easy ways of monopolistic agreements. But, while we can rejoice in this sharpening of competition, we must recognize that it does not, for the banks as a whole, solve the problem of shrinking earning capacity. As the total of Advances declines, the total income of the banks must tend to decline too. If net profits are to be preserved in the face of this pressure, one of four things must happen: total assets must be increased, other highly profitable assets must be found, outgoings must be reduced, or bank charges must be raised.

If the average return on assets is reduced by a fall in the proportion of high-yield assets the aggregate return can be supported by increasing the total volume of assets. This is, in fact, what has happened in the United States, in Canada, and in England alike in the last twenty years. But, as has been explained earlier in this book, the total of bank assets is closely regulated by the supply of cash and the enforced cash ratios, both of which are determined by the central bank. It seems improbable that the increase in aggregate assets (having been occasioned largely by war finance) will continue much longer, and if it stops, the commercial banks can do nothing about it. The expansion of total assets has in England probably[1] been sufficient to support bank net profits at their earlier levels; but if the demand for bank loans continues its secular decline the bankers will have to look elsewhere for a prop to profits.

The second escape for banks is to find other highly profitable assets. This was the line taken only too often in the United States in the nineteen-twenties. The pressure on profits may drive the bankers to relax their security

[1] As the published figures of profits are almost meaningless, I cannot be more definite.

standards and embark on rash ventures. The support given by many American banks to the real estate boom in the late nineteen-twenties is a case in point. It may be that there are some safe outlets yet to be discovered, but if pressure on profits should oblige the bankers to seek out borrowers they would have frowned upon in earlier days, it is essential that the bankers should equip themselves deliberately for their new function. Since the upheaval of the nineteen-thirties American bankers have shown increasing awareness of this. They have recognized that, while the opportunities for genuinely temporary lending have been restricted by the factors discussed above, there is a great demand for continuing finance of the medium and small firms which cannot resort to stock market issues. Continuing finance calls for assessment of future earning power rather than of current balance-sheet position; and even when properly investigated it remains a more risky business than temporary financing of the traditional type. Banks have therefore combined into groups for spreading these risks, and it has become usual for the largest banks in these 'correspondent' groups to maintain 'industrial counsellor' ('industrial consultant' we should say in England) departments. These departments include specialists in various industrial fields and this expert knowledge can be drawn upon by any of the correspondent banks. A small loan is, of course, ordinarily arranged by a single bank, but even in this case it is becoming common for the lending bank, if it has no industrial counsellors of its own, to draw upon the counsellor service of a correspondent bank. In either case—whether the loan is granted by a group of banks or by a single bank—the loan is often covered by a detailed formal agreement and is called a *Term Loan.* Repayment has to be made, usually by agreed instalments, over a period which may be as long as ten years.[1] In

[1] The obvious scope for the Term Loan is in the financing of the smaller firms, but it is also extensively used by the large corporations, especially at times of difficulty in the stock markets.

England there has been no corresponding development, though English bankers are increasingly ready to admit that the temporary appearance of a loan may be a mere façade.

As an alternative to defending his gross income, the banker may strive to reduce his outgoings. These fall into two main divisions: interest on deposits and expenses of administration. The payment of interest on deposits had its origin in the bankers' attempts to encourage the banking habit, and it is still largely based on that notion. But in the 'cheap money' period in which we have been living for many years now, rates of interest on deposits have fallen to very low levels—$\frac{1}{2}$ per cent. and 1 per cent. per annum are common rates—and in many circumstances nothing at all is paid. There is therefore little room for economy in this direction, though if interest rates in general rise it may be possible to refrain from raising deposit rates as much as overdraft rates are raised (so leaving a wider margin of net income for the banks).

Then there is the possibility of reducing expenses of administration. Economy in this direction means correct judgement of the number of offices worth maintenance, of how these offices should be run, of the number and qualities required in the staff, and of the recruiting policy which will secure that staff. What leaps to the eye is the extraordinary frequency of branch offices[1]—many of them cheek by jowl with other branches of the very same bank. Partly this is an inheritance from pre-amalgamation days, when the offices belonged to different banks, since amalgamated with each other. Partly it is due to an aggressive 'forward' policy of the great banks in the inter-war period, each one striving to capture the business of the new housing estates that were sprawling over the country-side. In the old days of purely manual clerical work perhaps this was not extravagant, and the Second War afforded

[1] 'Those buildings you see on every street corner where there's not a public house', as I heard one eminent banker facetiously put it.

opportunity for quiet burial of some of the grosser mistakes made during the years of aggressive branch expansion. But there is almost certainly still room for economy in this direction.

As regards organization and staffing of their offices, the English banks are passing through an awkward transition period. Formerly the clerical work was all done by hand and the amount of purely routine work was immense. The majority of bank employees had to be capable merely of doing this routine work well, being content with it, being scrupulously honest, and appearing to the customer-public as well-mannered and trustworthy persons. The banks were able to recruit such a staff by offering to boys leaving school a secure post with a salary scale which looked tolerable for small-town middle-class life. For their few really responsible posts, the banks could depend on the younger members of the families of the old private banks, and a sprinkling of general recruits among whom outstanding ability could always occasionally be found in the days when entrance to the university nearly always depended upon family fortune. Now the position has become quite different, both on the demand side and on the supply side. A very considerable proportion of the routine work has been mechanized, and for working the machines, girls straight from school (who will stay, on the average, for five or six years) are generally better suited than boys. For the male recruit the banks should therefore be able to offer a much more interesting and responsible career, with a very fair chance of rising to high rank. In the face of these changes it seems clear that the banks will have to change their recruitment policy for male staff. Whether after the transition the administration of banks will in total cost more or less than it used to do, it is impossible to say yet, when the banks are scarcely yet showing any realization of the ramifications of the transition through which they have begun to pass.

Lastly, the banks may continue to earn an adequate level

of profits if they can raise their charges. Their charges[1] are of two kinds—interest rates charged on overdrafts and loans, and turnover charges for working an account (i.e. making transfers of deposits—clearing cheques for customers).[2] Raising either of these charges at all sharply would meet with opposition. No one of the big banks could afford, for competitive reasons, to be alone in taking the step, and a concerted raising of charges by all the banks at once might, by arousing an anti-monopoly cry, be politically dangerous, though if profits were obviously declining the banks might be able to convince the public of the necessity of some increase. Against raising overdraft charges a bank always has to remember the competing sources of funds for the business man, and an all-round rise in these rates might well hasten the secular decline in the demand for overdrafts which is the source of all the trouble. From this point of view it would be safest to raise rates against the smaller borrowers, and it is notable that in the more sharply competitive American banking system there is a much wider range of bank loan charges, the little man in general paying much more there than his counterpart does in England. The quasi-monopolistic structure of banking in this country appears to have tempered the wind to the small borrower. Nevertheless it is probable that a differential rise in overdraft charges, unfavourable to the small borrowers, would be political dynamite and the banks will probably not do at all what they cannot do quietly.

The logical solution to the problem of profit-maintenance is a general scaling-up of turnover charges for

[1] I exclude here the interest receivable on bonds, discounts on bills, &c., the rates of which are not under the control of the banks.

[2] The latter charge is frequently replaced by an arrangement that the customer should maintain a certain average or minimum balance. This in effect reduces the interest payments the bank would have to make, as in the absence of such arrangements the customer could transfer some of his balance to Deposit Account. The arrangement virtually provides for a balancing of interest against the turnover charge.

working customers' accounts. Historically bankers have been at once middlemen in the capital market and account-keepers for the public. They have been able, thanks to profitable opportunities in the capital market, to provide the second service—the 'ledger-clerk service'—at virtually no charge to customers. With the relative decline in the opportunities in the capital market it is only reasonable that the bankers should charge substantially for the jointly supplied service of account-keeping. However, through being long spoiled by the favourable operation of joint-supply principles, the public is sensitive about the raising of turnover charges. Small customers may be capable of understanding the cost a bank incurs in running an account; but even if he understands he may not readily submit. The customer has open to him the alternative of not having an account at all or using it only very little—making more use of cash and of the (very considerable) facilities afforded without charge by the Post Office Savings Bank. That there is a high degree of sensitiveness about these charges is shown by the generosity with which banks differentiate in them for the purpose of attracting other business; anyone who is thought by the bank to have any influence, however slight and however indirect, on the placing of larger and more profitable business has a very good chance of getting his account worked either free of charge or at a nominal charge. Oligopoly in English banking has some odd effects—especially now that it is combined with a lively fear of the political consequences of patently monopolistic agreements. Basically, however, it is not so much political fear that restricts their earning capacity; rather it is a realization that a monopoly of banking would not imply a monopoly either of the source of loans or of the methods of settling debts.

Thus for a number of reasons the capacity of banks to make a living for themselves—to earn adequate profits—is in the melting-pot. During the first half of the twentieth century the expansion of total assets—especially in the two

great leaps of the wars—has sufficiently protected them from the consequences of the major change in their position as capital-middlemen. Everyone who hopes for reasonable stability in the value of money (stability that is far more vital to social organization than is often realized) must hope that this rapid expansion of assets will not continue; and if the expansion does cease, the banks may in course of time have to accustom the public, in one way or another, to payment expressly for the service of the ledger-clerk, a service performed by the bank for the convenience of the public, and traditionally subsidized by those customers who have also been borrowers at the bank.

10

THE DISTRIBUTION OF DEPOSITS[1]

1. *The Classification of Deposits*

WE now turn from the transactions that give rise to the existence of bank deposits to certain aspects of the deposits themselves. The economic significance of the creation of bank deposits is based on the power of a person disposing of a bank deposit to attract real resources. A large proportion of the total bank deposits is in practice being continually used to attract real resources, either to the final consumers or to the business men who intend to push those real resources one step nearer to final consumption. These deposits may be described as Income Deposits and Business Deposits. Their total has been called Cash Deposits. Cash Deposits alone are being continually turned over in settlement of debts and some authorities prefer to give the title of Money to no bank deposits except these Cash Deposits. The remaining bank deposits are held not for current business or income purposes but as *investments* or *savings*, and they are commonly called Savings Deposits. They are held not to meet the needs of the near future, but as part of that total stock of wealth which individuals look upon as their savings or private capital.

To anyone who has grasped the true nature of the demand for money balances for income-spending and for business purposes (the Cash Deposits) it will be apparent that the distinction between that part of the demand for money and the other part of the demand—the part satisfied by the holding of Savings Deposits—is a distinction of degree. All money is held for contingent excesses of payments over receipts. There is no sharp line between the

[1] This subject is discussed in detail by Keynes in his *Treatise on Money*, especially chaps. iii and xxiii, on which this chapter is based.

balance I hold in case I have to go on an unexpected long railway journey next week and the balance I hold in case I have to meet a heavy doctor's bill next year. The fact that it is a distinction of degree must be borne in mind throughout this chapter. Yet the distinction is sufficiently marked in common usage. From one part of his balance the individual looks for no advantage but the convenience which it affords him directly. From the other part—his Savings Deposits—he is inclined to look in addition for some small interest gain, and may be prepared to 'invest' it if an attractive opportunity arises.

The Savings Deposits are by definition not turned over at all. If a man wants either to pay the doctor's bill or to buy government bonds with his Savings Deposits he transfers some of his Savings Deposits to Cash Deposits, and then settles the debts he has incurred. Conversely, if a man decides that his Cash Deposits are unnecessarily large and he sees no better investment opportunity, part of his Cash Deposits become Savings Deposits. Savings Deposits are essentially *idle* deposits or 'hoards'. It is important to remember that whether deposits standing in a customer's name are to be Cash Deposits or Savings Deposits is directly decided by the customer, not by the bank.

The distinction between Cash Deposits and Savings Deposits corresponds in a very rough way to the distinction in English banking practice between Current Accounts and Deposit Accounts, and in America and elsewhere between Demand Deposits and Time (or Notice) Deposits. Not at all exactly, for some of the current account balances are not really Cash Deposits. For example, the minimum balances often maintained on current account to induce the bank to work the account without charge are really Savings Deposits, maintained because the individual enjoys, apart from possessing that private wealth, the advantage of a 'no-charge' current account. When interest rates offered by the bank on Time Deposits are very low people

are inclined to leave inactive balances—which have really become Savings Deposits—on Demand Deposit, because the low yield makes the bother of transfer and retransfer not worth while. When small income-receivers who cannot afford a current account minimize their cash holdings by working a deposit account up and down from month to month—looking to the account for convenience rather than interest—the balance is practically a Cash Deposit. In the nineteen-twenties some American banks are said to have allowed unrestricted drawing of cheques on Time Deposits—these deposits were then really Cash Deposits. But broadly speaking, the Demand Deposits (Current Accounts) may be taken as corresponding to the Cash Deposits. And the Time Deposits (Deposit Accounts) may be taken as corresponding to the Savings Deposits. At any rate a change in the proportion of Demand Deposits to Total Deposits may be taken as indicating a change in the proportion of Cash Deposits to Total Deposits.

11. *The Proportion of Cash Deposits to Savings Deposits*

The decision that a given bank deposit shall be a Cash Deposit or a Savings Deposit is, we have already seen, made not by the bank but by the customer in whose name that deposit stands. The deposit may, in fact, change its character without the customer notifying the bank; but it is more likely that such a change will take the form of a transfer from Demand Deposits to Time Deposits (or vice versa). The banks will transfer balances from one of their own classes to the other without hesitation—they leave the distribution of deposits entirely in their customers' hands. The banks decide the total volume of deposits; but the public, directly at least, decides the distribution between the Cash Deposits and Savings Deposits categories. What factors guide the public in determining the distribution?

To the individual the distinction between the two categories lies in the fact that whereas the Cash Deposit is expected to afford convenience only, the Savings Deposit

must in addition bear comparison with alternative uses—in investment—in its ability to yield an income. This second attraction of the Savings Deposit constitutes an inducement to the individual to keep his Cash Deposit at the minimum consistent with convenience, just as the attractions of other classes of private wealth (final consumption goods and 'investments') are factors continually depressing the individual's willingness to hold bank deposits of any kind. Individuals will therefore keep their Cash Deposits—the total of which is under their own control—at the convenient minimum dictated by the receiving and spending habits, the level of prices, &c. The total of Income Deposits accordingly directly reflects, given habits and customs, the general level of money incomes and of prices. Similarly the total of Business Deposits, given business men's habits, trade customs of payment and credit arrangements, directly reflects the level of business activities, raw material and manufactured goods prices, wage-rates, &c. Expanding trade and rising money incomes and prices are associated with expanding Cash Deposits, while contracting trade and falling money incomes and prices are associated with declining Cash Deposits.[1] We may go so far as to say that given business customs, the level of Cash Deposits is proximately determined by the level of prices and the state of trade.

If the banks have determined the total of all deposits and the total of Cash Deposits is determined by the state of trade, &c., then the total of Savings Deposits is automatically determined—for Savings Deposits are by definition All Deposits *minus* Cash Deposits. The total of Savings Deposits is not directly controlled by the bank's customers at all. In fact, given the state of trade, &c., in which the

[1] The direct connexion between the state of trade and the demand for cash balances is modified by the common disposition to grant credit more freely in times of good trade, though the anxiety of some producers to extend credit rather than not sell at all in depression partly counterbalances this. The same considerations affect the demand for Advances in the various phases of the Trade Cycle.

volume of Cash Deposits is implicit, the banks themselves determine the volume of Savings Deposits when by their operations in acquiring assets they determine the volume of All Deposits.

Yet the banks cannot force Savings Deposits on people. Nor can they cancel the Savings Deposits standing in the names of their customers. How then can they regulate the total of Savings Deposits? The answer has already been given in Chapter 1. They can *induce* people to change the distribution of their wealth between Savings Deposits and other assets (government bonds, industrial debentures, shares, &c.) by offering the public a more or less attractive price for certain classes of those other assets—in particular, government bonds. Given the public's preference for a certain liquidity distribution of their assets of all kinds, the banks can expand Savings Deposits by offering higher prices for government bonds (which implies forcing down the yield thereon) so as to make people decide to hold more Savings Deposits (the yield of which is now nearer to that on government bonds, and whose future capital value is certain) and less government bonds. Conversely the banks can reduce the volume of Savings Deposits by offering to sell government bonds at sufficiently lower prices. Government bonds now increase their attractions relatively to those of Savings Deposits and the public will be satisfied with less of the latter and more of the former. The implication of this analysis is that given the state of trade, the level of prices and money incomes, the public's business habits and the public's scale of preference for assets of different types, purchases of securities by the banks forces down the yield on gilt-edged securities, and sales of securities by the banks forces up the yield of securities. So far we have only repeated, in more complicated and accurate terms, what has already been said in earlier chapters. It is worth remembering that we showed in Chapter 7 how a change in the yield of gilt-edged securities may influence the state of trade and prices. A

change in the state of trade, &c., may affect the public's scale of preference for assets of different types. When we take these two factors as given we are therefore leaving the analysis unfinished and closing our eyes to the fact that the initial action of the banks has wide repercussions in upsetting the equilibrium. To some of these further repercussions we can now give some attention.

Suppose that at the outset all the directly relevant factors are in equilibrium with each other—the Cash Deposits, the Savings Deposits, the public's scale of preference for different assets, the state of trade, the price level, the internal position of the banks, and so on. In our last case we then supposed an internal change in the banks leading to their purchase or sale of securities. Now let us suppose the banks remain in internal equilibrium, but that some change extraneous to the banking system initiates an improvement in trade, with rising prices and money incomes.[1] The public will want more cash deposits. Given complete rigidity in bank assets the change must come about by the business men who initially want more bank deposits selling securities directly or indirectly to the people who are induced, by more attractive security markets, to reduce their hoards of Savings Deposits and increase their holdings of securities. Their deposits are handed over to the business men who use them as Cash Deposits, which they remain as they are scattered over the economy in the form of increased money incomes and prices.[2] The increased Cash Deposits can be supplied thus without any action on the part of the banks themselves. The proportion of Cash Deposits to Savings Deposits is increased—at the expense of some depression of the general level of security prices.[3] The banks are essentially 'passive' to the change.

[1] The possibility of such a completely extraneous change is admitted by every plausible theory of business fluctuations. In Wicksellian terms I am supposing a rise in the natural rate of interest while the market rate of interest remains unchanged.

[2] Business Deposits rise first, then Income Deposits.

[3] 'The general level of security prices' is a somewhat artificial concept

As the trade expansion gets under way the banks will, however, be met with increased offers of attractive assets—there will be an increased demand for advances. This demand for advances may be met by the banks selling securities. In effect, this means that part of the new Cash Deposits are obtained for the business men by the bankers, who allow Cash Deposits to be expanded by expanding advances as they contract Savings Deposits by selling bonds to people who had held Savings Deposits. The amount of pressure on the securities market is the same, whether the business men obtain deposits by selling securities to the public or by borrowing from the banks which do the selling of securities to the public. Cash Deposits go up to meet increased business needs, and given no change in the banks' total assets, Savings Deposits must go down by the same amount—which is also the value of the new securities held by the investing public. The expansion of the active part of bank deposits, if the banks decline to change their total assets, inevitably sets in train an upward movement in interest rates. As trade and incomes expand there is also certain to be some expansion in the public's demand for cash. If the monetary authorities are not prepared to expand the total supply of cash to meet these increased needs, the cash reserves of the banks are reduced. This causes a contraction of their total assets, and since the volume of Cash Deposits is decided by the public, the contraction must be confined in the first instance to the Savings Deposits. Savings Deposits are contracted by the banks selling securities to holders of Savings Deposits. The demand for cash, therefore, tends to accentuate the tendency for interest rates to rise.

The argument may be easily adapted to describe the reverse process. Contracting trade leads to contracting Cash Deposits, Savings Deposits rise as the banks buy securities, forcing up the prices of the securities they select

—some prices of securities move up as others move down, just as some commodity prices move up while others move down.

and forcing the rate of interest down. An influx of cash into the reserves of the banks from circulation reinforces the banks' efforts to expand Savings Deposits, reinforcing the tendency for interest rates to fall.

The movement of interest rates which is produced in either case tends, in the tortuous way described in Chapter 7, to reverse the movement of trade conditions. That is the way in which an absolutely stable volume of total bank deposits tends to put the brake on any decided upward or downward movement of trade. It should, of course, be remembered that flourishing trade can for some time stand rising interest rates, and contrariwise falling interest rates may for long fail to stimulate a trade revival.

If the monetary authorities wish to prevent, at least for a time, the operation of this monetary governor of trade conditions, they must be prepared to expand or contract total bank deposits to keep pace with the public's expansion or contraction of the Cash Deposits. If the banking system will, in a trade expansion, take from the public the indebtedness (securities) which the public offers in exchange for the additional bank indebtedness (deposits) it wants for carrying the increased volume of business, then no pressure of supply forces down the price of securities. And contrariwise for the opposite case. Such decisions the banking authorities can make: the commercial banks may be tempted, by the change in the supply of desirable assets, to change their cash ratios, and, more seriously, the central bank can operate on the cash basis. The fact that the public has direct control over the volume of Cash Deposits does not free the banking system from great responsibilities in influencing economic conditions.

Some economists have preferred to treat these changes in the proportion of active to inactive deposits as changes in the velocity of circulation of bank deposits. The difference is one of formulation only. If we prefer to do so, it is perfectly legitimate to say that trade activity implies an increase in the flow of money coming into the market in

exchange for goods. If the volume of money remains unchanged an increased velocity of circulation will have occurred. Uncomfortably high velocity induces the public to lower their valuations of non-monetary assets. The banks can proceed to restore velocity of circulation to normal and keep interest rates down by adding to total deposits, or not—the conclusions are unaffected by the particular formulation we choose. I have preferred to use the classification-of-deposits formulation because it appears more realistic to me. It takes account of the two quite different purposes for which people do in fact hold bank deposits, and by picturing private wealth as consisting of Cash Deposits, Savings Deposits, and other assets, it enables us to see the operations of banks in their true light as a continual process of exchanging indebtedness between the banks and the public.

III. *Deposits Classification and Legal Cash Ratios*

A feature of central banking legislation in the United States and in other countries which have been influenced by American legislation[1] is that the cash ratios, which the commercial banks are obliged by law to maintain, vary according to the classification of deposits. In America, for example, the cash reserves to be held must be 12, 18, or 22 per cent.[2] against Demand Deposits, but only 5 per cent. against Time Deposits. This system of adjusting the cash ratios to the classification of deposits dates from a time when legal minimum cash ratios were regarded not as a device for giving control to the central bank, but as a protection for the depositing public against illiquid banks. It was considered that as banks could insist on, say, a month's notice before Time Deposits could be exchanged for cash, the proportion of cash to be held against them need not

[1] It has become almost a standard feature in banking legislation since the end of the Second World War.

[2] According to the location of the bank in the 'country', in a 'Reserve City', or in a 'Central Reserve City'.

be anything like as great as that held against deposits exchangeable for cash on demand. Into the propriety of this arrangement from the point of view of protecting the public against bad banking it is unnecessary to go here. We are concerned rather with the effect of the distinction on the relation between commercial bank policy and central bank policy.

As long as the proportion of Demand Deposits to Total Deposits remains unchanged the different ratios cause no disturbance: it is as though one flat ratio (a weighted average of the two legal ratios) were applied to the Total Deposits. The different ratios become a complicating factor once there is a change in the proportion of one class of deposits to the other. If there is a shift from Demand Deposits to Time Deposits the legal cash reserves required decrease. Given unchanged cash reserves the banks have an inducement to expand total deposits. Conversely a shift from Time to Demand Deposits sets in train a contraction of total deposits. Is this automatic result of a shift in proportion a desirable feature of a modern banking system?

In answering this question we shall cover most of the ground if we take three cases of a shift in the distribution of deposits: (1) the Trade Cycle movement, (2) a secular change in the public's scale of preference for Savings Deposits and other classes of assets, and (3) a change in the proportion of Demand to Time Deposits which does not reflect a true change in the proportion of Cash to Savings Deposits.

(1) In periods of trade expansion there is an automatic shift from Savings Deposits to Cash Deposits. This necessitates an increase in the average cash ratio, so forcing the banks (in the absence of cash expansion) to curtail Savings Deposits even more, implying a more abrupt rise in interest rates than would otherwise occur.[1] Conversely trade decline implies a shift away from Cash Deposits, a drop in

[1] Unless the central bank 'offsets' the movement by adding to the cash base.

the average cash ratio, and a more abrupt decline in interest rates than would otherwise occur. Since these movements of interest rates tend (as shown in Chapter 6) to reverse the trade movements the operation of this system tends to check the development of Trade Cycles: a point in its favour. The extent of this advantage depends on the stress laid upon the interest rate weapon for combating the Trade Cycle.

(2) Now suppose a secular change in the public's scale of preference for Savings Deposits and other classes of assets. Suppose, for example, that there is increasing confidence in the banking system, coupled with public realization of the inefficacy of the law in protecting the ordinary investor from the clutches of shady company promoters and 'share sharks'. Then people may prefer to hold more of their accumulated wealth in the shape of bank deposits (Savings Deposits, of course) and less in securities. Then, instead of public purchase of securities passing cash deposits into the hands of entrepreneurs involved in capital construction, there would be a continual flow from Cash Deposits to Savings Deposits, the entrepreneurs failing to secure enough money to sustain their operations. To support economic activity at equilibrium level it is desirable that the banks should sustain Cash Deposits by buying securities (or making advances to the entrepreneurs) to the amount of the increase in Savings Deposits. If the public wish to accumulate wealth through the banking system it is desirable that the banking system should see that no passivity of its own hinders the process of real capital accumulation. Now the operation of the system we are discussing aids this process. For as Cash Deposits fall and Savings Deposits rise the required cash ratio falls, so that the amount of cash inflation which the central bank needs to do is reduced. Some additional cash basis is still required, for if Cash Deposits are to be sustained the cash basis must be swollen by the amount needed to support the increase in Savings Deposits. Here again, as in our

first case (from which this case does not greatly differ), the operation of this system of cash ratios tends to reduce the volume of cash manipulation which the central bank needs to do to keep the economy in equilibrium.

(3) Lastly, we will take the case of a change in the distribution of deposits which is nominal but not real. We have suggested above that the distinction between Savings Deposits and Cash Deposits is not identical with the distinction between Time Deposits and Demand Deposits. It is possible for Time Deposits to increase or decrease (total deposits remaining unchanged) without there having been any genuine change in the proportion of Savings Deposits to Cash Deposits. This might occur if a change in customary methods of charging bank customers led to a reduction in the minimum balances that many English bank customers keep in their current accounts. Another good example is said to have actually happened on a large scale in the United States in 1924–9: in order to reduce the cash reserves they were required by law to keep, banks are said to have induced customers to transfer balances to Time Deposits by allowing them to draw cheques freely on those deposits—i.e. treating them as Demand Deposits. Here we have a case of the complex cash ratio system actually stimulating a change that reflects no genuine change in the economic condition of the country. In either of these cases (and contrariwise in conceivable opposite cases) the banks' cash needs are reduced and they are stimulated to increase total deposits—acquiring assets and forcing interest rates down—without there having been any such change as occurred in our other two cases to make an increase in total deposits desirable. The banks are enabled by the complex cash ratio system to free themselves from the fetters with which the central bank restrains them. Of course the central bank can soon bring them to heel by reducing the cash basis in accordance with the reduction in cash needed to support the original volume of total deposits. But it may not know precisely what is

happening.[1] And even if it knows what is happening it may consider it a nuisance to have to use some of its ammunition (securities to be sold) for such a trivial purpose. Or it may, if the country is not enjoying an obvious boom, be positively embarrassing for the central bank to sell securities (an operation generally understood as deflationary) in order to offset the economizing of cash reserves. In any case the possibility of such changes has the undesirable effect of obscuring the central bank's view (and that of outside experts) of contemporary conditions.

From the point of view of control of commercial banking there are thus arguments for and against the complex cash ratio system. Decision must rest on the relative importance attached to the conflicting arguments. Being inclined to set a low value on interest rate movements as a weapon to combat the Trade Cycle, and being inclined to emphasize the importance of correct diagnoses by the central bank—and therefore to rate as a serious disadvantage anything obscuring the view or complicating the situation —I myself prefer the simple system. Other writers, setting a higher value on interest rates as correctives of trade fluctuations, would perhaps decide in favour of the complex system.

[1] It may be aware of such changes going on; but it cannot know how far a known change in Time Deposits is due to this factor and how much to other far more fundamental changes.

11

QUALITATIVE CREDIT CONTROL

1. *The Historical Background*

THROUGH most of this book the treatment of authoritative control of the banking system has been in terms of *quantitative* control—control of the *quantity* of bank money and the *prices* (rates of interest) at which it is made available to business men and other spenders. This emphasis reflects the main strand of thought about central banking during the last hundred years or more, but it would be a mistake to assume that it has ever been quite the whole story. The alternative line of *qualitative* or *selective* control has a long history, though it has generally remained very much in the background. During the nineteen-thirties and forties there has, however, been a marked development of interest in this notion of qualitative control. This change in the climate of opinion has been due mainly to loss of faith in the traditional quantitative controls that centre round the 'Bank Rate' weapon. Following the later work of Lord Keynes and the largely negative outcome of empirical research, it became fashionable to stress the disturbing, rather than the curative, effects of rapid changes in interest rates, and to say that interest rates should be kept at a steady low level. Hence the acceptability, on both sides of the Atlantic, of the 'stable bond market policy'. While, however, it may be believed that a low stable interest rate provides a favourable working-background for capital development, it is permissible to argue that in such circumstances the economy is liable to run off the rails more easily in some directions than in others, and that the central bank should use financial controls to check the unhealthy developments in these *particular directions*.

This notion was the more readily received by central

bankers who were bred in a *banking* tradition. After all good banking, as distinct from central banking, obviously depends upon a qualitative, a selective, approach. The good banker is the one who can distinguish the sound from the unsound borrower. His whole life is spent in selecting, in deciding which lines of activity may be safely supported, as well as distinguishing the wise and honest from the foolish men and knaves. So in the nineteenth century the Bank of England as a banking corporation modelled its relations with the discount market and other borrowers partly on the precepts of sound commercial banking. Paper eligible for discounting had to bear two names that implied some guarantee of the wisdom of the particular transactions giving birth to the paper. The Bank of England had a fright in 1857, when it saw that the appetite of the discount market for any discountable paper had led to foolish speculation, especially in the North American trade touching Liverpool and Glasgow. Thinking that it could not protect itself (or the market) against such unhealthiness, it withdrew for a time into isolation from the market. When, in the interest of central banking development, it emerged from its isolation it was more careful than ever before to watch the quality of the paper handled in London, and in the course of the following decades it exploited its growing contact with the market to influence the quality standards ruling in the market generally. By the early nineteen-hundreds its power, in this as in other respects, had grown very considerably, and the experience of London in 1906–7 afforded an instructive contrast with that of fifty years earlier. Again the crest of the trade boom was marked by rabid speculation in New York and in North American trade generally; but on this later occasion the Bank of England discriminated persistently through the years 1906 and 1907 against 'North American paper' —any bills that appeared to be peculiarly associated with the American speculative boom. The comparative ease with which the crisis passed in London must, I think, be

ascribed in some measure to this action of the Bank—the *qualitative control* it had exercised to restrain speculation in particularly dangerous directions.

Because the central bankers of that day, and most other people who thought, spoke, and wrote about monetary matters, were bankers in the ordinary sense, the relevance of these qualitative aspects of control was greatly exaggerated in the current mode of thought. This had unfortunate effects in the fashioning of the central banking arrangements of the United States. After intermittent discussion extending over decades, the United States authorities were frightened by the 1907 crisis into a grand inquest on the problems of monetary control; and after this inquest the Federal Reserve System was established. Into the legislation there was written the doctrine that a central banker may lend only on sound commercial paper. The eligibility of rediscountable assets was narrowly defined—so narrowly that when the System faced its first major test, in 1932–3, it was unable to release cash quickly enough to avert catastrophe.

Meanwhile, the theory of central banking had become, especially in Britain, a more conscious theory. In the works of Hawtrey and Keynes particularly the ideas of quantitative control, and of the implications of the central bank's position as lender of last resort, had been carried forward far beyond the elementary lessons of Bagehot. When the American crisis of 1933 discredited the narrow definitions of rediscount eligibility, the ascendant doctrines of quantitative control received fresh impetus. But recent American experience had at the same time, and in a quite different way, afforded cause for reconsideration of the alternative —or rather supplementary—policy of qualitative control. The roots of the financial crisis of 1932–3 went back, it was generally agreed, to the boom of 1927–9. Now two prominent features of this boom were the unhealthy extremity of the stock market speculation and the boom in durable consumption goods, the latter fostered by the

support given by instalment credit to the purchasers of the new durable consumption goods. The Wall Street boom was the more glaring of these two evils, and it had been a thorn in the side of the central bankers even while the boom lasted, owing to the prevalent (but fallacious) notion that Wall Street was drawing credit away from its proper uses in legitimate industry and trade.[1] It was in the light of this experience that the Securities Exchange Act of 1934 gave to the Federal Reserve System powers for regulating lending (not only by banks) for stock market speculation. Similarly, the post-war extension of war-time powers of regulation of consumer credit has as its background the belief, based partly on experience in the nineteen-twenties, that variations in consumer credit are sizable in relation to total variations in national income and that they finance a peculiarly unstable part of consumers' expenditure. These two American experiments in qualitative control by the central bank merit our particular attention.

11. *American Regulation of Borrowing for Stock Market Speculation*

The regulation of borrowing for speculation in securities is a duty imposed on the Board of Governors of the Federal Reserve System not by the Federal Reserve Act, nor by the Banking Act of 1935, but by the Securities Exchange Act of 1934. By this Act the Board was empowered to fix 'margins'—the margin being that part of the price of a security which the purchaser may *not* borrow. The effect is to limit the sum that can be borrowed to a proportion of the market price ruling at the time of purchase of the security.

It is notable that the power given to the Board is to make regulations directly controlling transactions entirely outside the Federal Reserve System. Brokers, dealers, and members of national securities exchanges are forbidden to lend to anyone on registered securities in excess of the

[1] This fallacy is examined in Appendix III.

amounts allowed by the margins regulations. Brokers, dealers, and members of national securities exchanges may not borrow on registered securities except (*a*) from member banks, or (*b*) from non-member banks who have agreed to observe all the rules imposed in this matter on member banks, or (*c*) from other brokers, &c., in accordance with regulations of the Board of Governors.

The first regulation made in exercise of this power was the Board's Regulation 'T'. This controlled the dealers, brokers, &c., only, leaving security speculation financed by direct bank loans not directly touched. But after eighteen months it appeared that the banks were taking advantage of their freer hands and, by Regulation 'U', lending by banks for security trading was put on the same footing as lending by brokers, &c. Regulation 'U' is binding on all banks, whether members of the Federal Reserve System or not.[1]

When these regulations were first imposed they adopted, in prescribing the margins, an ingenious but elaborate formula[2] which the 1934 Act had laid down as standard but had not laid down as obligatory. A loan on a security was not to be greater than whichever was the higher of:

(*a*) 55 per cent. of the current market price of the security;

(*b*) 100 per cent. of the lowest market price of the security after 1 July 1933, but not more than 75 per cent. of the current market price.

This meant that as long as the price was less than 133 per cent. of the lowest price since 1 July 1933, the customer could borrow up to 75 per cent. of the market price, because up to that point (*b*) would be the effective rule and 75 per cent. of the market price would not exceed 100 per cent. of the lowest price. As the price advanced

[1] This and some of the following paragraphs are reproduced with little change from my *American Banking System* (Oxford, 1948).

[2] It was explained fully in the *Annual Report* for 1935, on which the following passage is based.

beyond 133 per cent. of the lowest, the amount borrowed could not be increased at all until, at 182 per cent. of the lowest, rule (*a*) (above) became the effective limit. At this point (182), 55 per cent. of the current market price would equal 100 per cent. of the lowest price, so that for all higher prices the loan limit would be 55 per cent. of current market price. Thus between the price points 133 and 182 no additional amount could be borrowed on a security on account of its rise in market value: the profit of the rise could not be withdrawn or used as a margin for further borrowing. This limitation of additional borrowing restricted, in a market phrase, 'pyramiding' of speculative purchases, and the price range 133–82 was therefore called the 'anti-pyramiding zone'. Above 182 profits could be withdrawn at the rate of 55 per cent. of the further price rise—i.e. pyramiding once more became possible. Late in 1935 most active stocks, in fact, rose above the anti-pyramiding zone, and early in 1936 the Board prescribed increased margins, with the effect of raising the top of the anti-pyramiding zone to 222.

Great though the attractions of this formula were for putting the brake sharply on borrowing in a rising stock market, changing circumstances would in course of time have made it inappropriate, in that individual stocks would move in price relatively to each other, making quite arbitrary, as a regulator of speculation, uniform percentage increases on the prices ruling on 1 July 1933. However, the Board did not wait for this basis to become seriously out of date, and in the course of 1936 dropped the complicated formula in favour of a flat percentage margin requirement. The Board gave simplicity as its justification.[1] Since

[1] 'A margin requirement expressed as a single percentage of current market value is simpler and more easily understood than the statutory formula, and has also long been generally used by banks in determining margins on security loans. It was the judgment of the Board, therefore, that a flat rate for banks would best serve the public interest. For the sake of uniformity the same requirement was adopted also for loans by brokers.' (*Annual Report* for 1936, p. 33.)

that date the Board has adhered to the flat percentage formula.

The Board raised the percentages (of cash margins required) during the recovery of 1934–6, and dropped them sharply in the autumn of 1937, when the general business recession seemed to call for every possible stimulus to enterprise. After that the percentages remained unchanged until nearly the end of the war. An official writer just before the war commented that experience had 'not been sufficient to test their effectiveness thoroughly'.[1]

During 1945 the Board made considerable use of this new weapon with impressive results.[2] In the inflationary reconversion phase of 1946 the margin-requirements were held for over a year at 100 per cent.—i.e. dealings had to be on a strictly cash basis. It is interesting to notice that, in an article in the *Federal Reserve Bulletin*,[3] the Chairman of the Board ascribed this policy not simply to stock-market conditions but to the broader economic situation:

> We are not justified, for example, in fixing margin requirements exclusively by reference to the movement of stock prices, as some people have suggested. The general credit situation must be the main criterion, and this in turn is an integral part of the business situation. When margin requirements were fixed at 100 per cent., the general credit situation was highly inflationary because of the immense volume of purchasing power in the hands of investors and the general public . . . this is not a time for encouraging new issues even for production purposes because with the scarcity of materials and labour, it would only add to the inflationary pressure.
>
> This is not a one-way street. When the situation changes, and there is need to stimulate the use of credit for purchasing securities,

[1] E. A. Goldenweiser, in his chapter, 'Instruments of Federal Reserve Policy', *Banking Studies* (Washington, 1941), p. 406. The Board of Governors had in their 1937 Report expressed the view that by diminishing the amount of forced liquidation when the collapse came, the high margin requirements during the boom moderated the slump as well as the boom (p. 10 of *Annual Report* for 1937).

[2] See *Annual Report* for 1945.

[3] Nov. 1946.

it will be time to consider lowering margin requirements. This would be a time . . . when there will be sufficient supplies of materials and labor to justify the encouragement of new issues of corporate securities, provided there is at the same time a prospect of declining production and declining employment.

The Board did not give the inflationary pressure much time to ease off: as from 1 February 1947 the margin requirements were reduced from 100 to 75 per cent., on the ground, Governor Eccles had indicated, that 'the most dangerous phase of post-war inflationary pressure was past'.[1]

In the winter of 1948–9 the economic climate changed, and the first half of 1949 saw a decided recession from the peak prosperity of 1948. As one of its anti-slump measures the Federal Reserve System lowered the percentage further, to 50. After this change there was a moderate increase in the volume of borrowing for stock-market purposes, but at no time since the end of the war has this volume been large. There have been no fireworks in Wall Street: indeed, one of the most remarkable contrasts between the American post-war boom and any of its predecessors has been the absence of wild speculation in the stock markets. This novel placidity cannot be ascribed simply to memories of burnt fingers in 1929, because similar memories must have been just as fresh on earlier occasions. Partly the difference may be due to the change in the distribution of income and taxation, and more to the capital gains tax which hits this type of speculation.[2] But it is impossible to resist also the conclusion that in considerable measure the absence of extravagances in Wall Street has been due to the obstacles imposed by the margin requirements imposed by the Federal Reserve System, and if this is so, the new powers have amply justified themselves. They have helped the authorities to keep the boom under control.

[1] *Economist*, 25 Jan. 1947.

[2] On these points I have had suggestive comments from Mr. H. Plous, of the University of Wisconsin.

III. *The Regulation of Consumer Credit*

The second interesting American innovation in this field was the regulation of consumers' instalment credit. This was originally introduced in 1941 under emergency powers, principally with a view to discouraging non-essential production and so releasing resources for war production. The emergency power lapsed towards the end of 1947, but the Board of Governors of the Federal Reserve System pressed for reinstatement of this particular power, the case being put in the following terms in the Board's Report for 1945:

> Over the past 30 years, consumer instalment financing has come to occupy an important and strategic place in the national economy. Such financing is essential to the mass distribution and consequently to the mass production of consumers' durable goods. From time to time, however, the expansion and subsequent contraction of consumer credit have gone so far as to accentuate the upswings and downswings of the business cycle. There is no way of preventing such excessive expansion and contraction except governmental regulation of the terms on which consumer credit shall be made available, such as the down payment required on instalment sales or financing and the length permissible for instalment contracts. To provide for such regulation, by legislation which will contemplate the timely tightening and timely easing of such terms, will assist the overall program of stabilizing the national economy at a high level of production and employment.[1]

In 1948, when the U.S. government was afraid that the inflationary boom was getting out of control, the Reserve System was again given power to regulate this class of credit on lines broadly similar to the war-time arrangements. Regulation 'W', as it was called, was allowed to lapse in mid-1949 when the inflation scare had given way to fears of slump.

Like one of the regulations controlling stock market credit, Regulation 'W' was binding on many people outside

[1] pp. 24–5.

the banking system. All persons engaged in consumer instalment credit, including dealers, mail-order houses, stores, financial companies, loan associations, and so on, had to be licensed by the Board of Governors. Their transactions had to conform with rules laid down by the Board, prescribing minimum 'down-payments' (i.e. first instalments or 'deposits' as they are often called by English traders) and maximum maturities (i.e. the periods over which instalments may be spread). The war-time regulations prescribed minimum down-payments of $33\frac{1}{3}$ per cent. for cars, household appliances, radios, &c., and 20 per cent. for furniture; under the later regulations the $33\frac{1}{3}$ per cent. was the rule for cars, and for other classes of goods 15 per cent. As to maximum maturity, the war-time regulations laid down a period of 15 months; afterwards 21 months became the general maximum.

The efficacy of these restrictions may be judged by the fact that when there was no restriction there was widespread relaxation of credit terms—down-payments were reduced and contract maturities lengthened—especially for those goods in plentiful supply. Then again, in the first months of 1949 the restrictions were relaxed as part of the anti-recession policy of the Federal Reserve System, and this easing of instalment credit conditions is believed to have helped to maintain a high level of expenditure for consumer durable goods. At the end of June 1949 the restrictions disappeared, with the lapse of the anti-inflation legislation under which they have been imposed. Once more, the removal of restrictions heralded a cutting of down-payments and a lengthening of repayment periods. In the light of this experience it would seem likely that this weapon of economic policy will be restored to the American armoury as soon as conditions call for strong restraining action.

IV. *Conclusion*

The American experiments just described appear to have justified themselves and it would not be strange to see some extension of them in the future. It is therefore worth considering again what is the theoretical justification for resorting to such measures instead of relying exclusively on the traditional controls of the quantity and price of credit. The traditional technique is obviously appropriate if all parts of the 'money market'—everywhere where there is a demand for credit—stand in such relation to each other that a change in supply conditions affects all parts equally and simultaneously. In these conditions there is no point in any attempt at 'qualitative control', since restriction applied at one point rapidly restricts supplies at all other points; and an easement at one point at once spills over into all other parts of the money market.[1] Lending on sound trade bills would at once ease the Stock Exchange call market, and so on. But bankers have always known that the market for credit is highly imperfect—that the business of lending and borrowing is so wrapped up with personal risks that there is considerable scope for discrimination against particular classes of borrowers. Under great pressure (as in the Wall Street boom of 1928–9) the bankers' efforts can be defeated by the seepage of money from 'good uses' to 'bad', but at most times the channels of credit are sufficiently embanked by market imperfections to make qualitative control worth while.

Since it is on market imperfection that qualitative control depends, there would seem to be peculiarly large scope for it in some of the 'newer' countries of the world, where capital and credit markets are sometimes isolated from each other to a degree tiresome to the conventional central banker. There the traditional controls of the quantity and price of credit have encountered institutional obstacles,

[1] This matter has been exhaustively discussed by economists, notably by Fritz Machlup in his *Börsenkredit, Industriekredit und Kapitalbildung*.

often extremely intractable obstacles; and it may well be that central bankers in these 'newer' countries would get quicker results if they thought less in terms of Bank Rate and more in terms of direct control of particular classes of credit transactions. This may, *it* is true, take them far into the field of direct contact with the business people, as we shall see in the next chapter.

12

BANKING IN THE NEW COUNTRIES

1. *The Significant Peculiarities of Newer Banking Systems*

THROUGH most of this book the problems and their solutions have been generally stated in terms which apply directly to the highly developed banking systems either of the English type or of the American type. I would emphasize once more that this preoccupation with English and American conditions reflects no notion that those conditions are the ideals from which those of other countries show unfortunate aberrations. Rather our special concern with English and American banking is based first on the fact that those conditions are likely to be of most direct interest to the majority of readers of a book written in English, and second on the fact that the systems of other countries do appear to be developing along similar lines—indeed, they are frequently being forced to develop along similar lines. Nevertheless, there are problems peculiar to other systems that are important to those countries and are also worth studying for the sake of the light they throw on the general principles of banking. The countries to which we shall refer in examples will generally be India, Canada, Australia, and South Africa; but the varying conditions in those countries have their counterparts in the South American republics, in Japan, and in many of the minor countries of Europe.

The important peculiarities distinguishing these banking systems from the more highly developed systems are three in number: (1) the banking habit may be little developed and banking offices be few and far between; (2) there may be no short money market, or no satisfactory short money market; and (3) central banking may not yet be effectively established. It should not be thought that *all* these three conditions are to be found in each one of

the countries we are considering. I believe all of them lack a really good short money market. But in some—notably Canada and to a less extent Australia—the banking habit is very highly developed and banking offices are 'plentiful as tabby cats'. The third condition—the existence of effective central banking—is becoming more common, but is still not as common as is the mere existence of a central bank.[1]

Where there is little banking of any kind, as in China, Burma, and in many parts of South America, the bulk of transactions are necessarily settled in cash. Cash forms the greater part of the supply of money. Then the most important source of changes in the supply of money is in the variation in the supply of cash. That cash may be metal or government notes—or more frequently both together. The changes in supply then occur as a result of mining of the precious metals, or foreign trade in them, or changes in the government issue of notes. It is not impossible, under such circumstances, for changes in the banking system to cause disturbances in the price situation; but changes so initiated cannot be violent or prolonged unless they are supported by parallel changes in the supply of cash. An increase in lending by banks to cultivators, for example, would produce inflationary effects of the usual kind; but the inflation would very soon be checked if there were not forthcoming a great increase in cash to support the increased value of transactions. Since what banks there are will generally be found concentrated in a few great trading centres (Rangoon, Canton, or Shanghai, for example), contact with the banks is generally confined to the traders in those centres. A bank inflation is therefore

[1] On the banking systems of these countries good books are scarce. The work of outstanding importance (and of much wider interest than its title indicates) is Plumptre, *Central Banking in the British Dominions*. The League of Nations during the nineteen-thirties occasionally published useful Memoranda on *Commercial Banks*. In 1951 the Oxford University Press expects to publish an 'omnibus' volume on *Banking in the British Commonwealth*.

liable to mean development of speculation and investment in those centres (as in Bombay in the eighteen-sixties, to take an old but extremely clear example). The presence of trading contacts but absence of banking contacts between the inflationary centre and the hinterland quickly leads to a drain of cash from the centre to the hinterland.[1] This drain of cash quickly checks the expansionist policies of the banks. (The same tendency appears, of course, in a country with a highly developed banking system, especially if there is no branch banking; but the drain of cash into circulation will not be nearly as marked.) Unless banks are very cautious, bank failures occasioned by inability to produce cash on demand are likely to be numerous. In such a country more than elsewhere, therefore, the authorities are likely to be concerned about maintaining the liquidity of the banks and general regulation of their assets. Indeed, it is because historically such conditions were common that government regulation of commercial banking has traditionally been directed to the maintenance of liquidity rather than to subjection of the commercial banks to a central bank.

The second feature which distinguishes these countries from the most advanced banking countries is the absence of a good short money market. The Canadian banks have an outlet for short-term funds in the local bond markets; and these have been cultivated with success by the young but active central bank (the Bank of Canada). In Australia conditions are more primitive; attempts have been made (with little success) to develop a market in Treasury Bills. In South Africa and in South America there are virtually no markets in short-term funds. In India there are markets, but the divisions between them—between the indigenous and the European markets, for example—are so difficult to overcome that it is impossible to speak of *a* market of

[1] This works very much on the lines explained by Senior in his *Transmission of the Precious Metals*, *Value of Money*, and *Cost of Obtaining Money*.

the kind needed for contact between a central bank and the commercial banks. Indeed, the mutual independence of the various money markets implies absence of that integration of banking affairs which generally makes it reasonable to talk of a banking *system*. The great European financial centres have short money markets which are more or less well developed; elsewhere even in Europe there is little to be said for attempts to develop an institutional structure of the London type and later in this chapter we shall return to the alternative of developing an entirely different technique of central banking.

The third peculiar condition which used to be common in these countries is the absence of an effective central bank. There is now no country of any account which has no central bank; but in many of the smaller countries the newly established central bank has not yet found its feet. Its most important operations are often confined to the foreign exchange market.[1] This, of course, is a useful function in these days of chronic exchange difficulties, but it is quite a different business from controlling the commercial banks. In general these new central banks have been established in these countries in the expectation that they might develop along the traditional central banking lines. They have soon, however, found their environment unfavourable to any simple emulation of the Bank of England, and it is worth considering how, in the absence of the institutional framework of London, a central bank can exercise effective control.

II. *Central Banking in the absence of a Short Money Market*

First there is the problem of central banking technique in a country which is covered by a network of modern commercial banks, the banking habit being assumed wide-

[1] This is not true of Canada, where the central bank has very definitely found its feet and has been most active not in the foreign exchange market but in the bond market. (See Plumptre, op. cit., *passim*.)

spread. Of such a country Canada is the leading example; but in Australia and in South Africa conditions in some ways approach it. It is easy enough to subject the commercial banks to the behaviour of the central bank's assets. To effect this three steps are usually taken: (1) the note-issuing powers of the commercial banks are either abolished or severely restricted; (2) the commercial banks are required to maintain at the central bank balances bearing a certain relation to their deposit liabilities to the public; and (3) the central bank is constituted lender of last resort. Of these three steps the third and the less radical form of the first are absolutely necessary. The second and the more stringent form of the first are advantageous in that they help to provide the central bank with an income: for purposes of control they are mere embroideries. The constitution of the bank as lender of last resort is fundamental in that it removes from the commercial banks all responsibility for providing reserves against an abnormal loss of cash. The commercial banks can then be relied upon to minimize consistently their cash reserves in order to maximize their profits.[1] The plan of obliging them to hold certain minimum-ratio balances at the central bank, apart from the advantage noted above, merely serves to give point to this expectation that their reserves will bear a constant ratio to their deposit liabilities. Restriction of their note-issuing rights prevents them from adding to their cash by printing more notes. (We assume that there is no right of free coinage in the country: if there is, a stable foreign exchange policy is implicit. The embarrassments of the central bank which follow from the right of free coinage are identical with those which, we shall find below, are implicit in any predetermined foreign-exchange policy being followed.)

In advanced financial centres we are apt to assume that that is the end of the matter. For if the volume of bank deposits is subject to the central bank's assets the central

[1] Subject to the reservations explained in earlier chapters.

bank can make the supply of bank deposits (and so short-term interest rates) what it likes simply by manipulating its assets. But in these other countries the manipulation of a central bank's assets is by no means such a simple matter. Given the absence of a good bill market (the presence of which is what makes control so easy in London), the central bank's assets will ordinarily be government securities, foreign exchange, gold, and perhaps loans to the commercial banks. If the last item does regularly show substantial indebtedness of the commercial banks all is well, for the central bank can impose whatever interest rate it chooses for these loans, and so influence the willingness of the commercial banks to lend to the public. It controls, that is to say, the basic short-term interest rates —which is all the Bank of England does. But in fact when a central bank is superimposed on an established banking system it is not easy at an early date to lead the commercial banks into indebtedness to the central bank, and such indebtedness appears to be rare in fact. Apart from this immediate consideration there are bound to be periods—and often those periods when the central bank is most anxious to exercise control—when the foreign exchange situation leads to the commercial banks' indebtedness to the central bank disappearing.

In its holding of government securities, however, the central bank is not passive—its holding depends on the amount it has chosen to acquire. There is some possibility that the new central banks of the world will be able to control the cash basis partly by manipulating their holdings of government securities. But there is a substantial difficulty which severely limits the utility of the weapon. The stock markets of these countries, though modelled on the great exchanges of London and New York, are inevitably much more limited in their capacity for completing big deals. It is easy enough to suggest that the Commonwealth Bank of Australia, for example, could reduce the cash basis by selling government bonds in Melbourne; but given the

size of the Melbourne market, any very big sales would lead to the closure of the Stock Exchange—because buyers would not ordinarily be forthcoming to take up huge amounts at short notice. The same applies to the opposite process of big purchases—or attempts at purchase—by the central bank. And even when the transactions could be completed it would only be at the cost of enormous variations in prices of the securities. These security price variations might be counted an advantage in that the central bank would be exercising direct influence on the long-term rate of interest. But the Government might fear the reactions of public opinion, the stimulus to speculation, and the possibility of the investment outlet for government bonds being permanently narrowed by the spectacle of wide price variations. And the central bank would have to run risks of substantial losses resulting from price variations of assets it may wish to sell at any time. A central bank might conceivably be encouraged to do this, the Government bearing all losses; but it is most unlikely. In spite of these difficulties the Bank of Canada has developed successfully its operations in the securities market. Canadian debt policy has been on the whole favourable to these developments, and might not always be so, but the success has been striking enough to warrant imitation elsewhere.[1]

While internal open market operations are restricted, the central bank is confined to regulating the cash basis by its operations in gold and foreign exchange. A central bank always deals in either gold or foreign exchange because the holding of a reserve of gold and/or foreign exchange is generally (and rightly) held to be a duty of the central bank. In considering the effects of these operations we shall, for the sake of brevity, talk only of gold. Whether the

[1] So far from wanting open market operations to cause big changes in market security yields, the tendency nowadays (as exemplified in the 1949 Report on Central Banking in Ceylon) is to advocate open market operations by the central bank for the purpose of stabilizing security markets (with the ultimate aim of encouraging public investment in bonds).

central bank does or does not choose to turn the foreign balances it acquires into gold does not affect the internal situation.[1] Now there are two extreme possibilities. Either the central bank will consider the price of gold (foreign exchange rate) fixed and will buy and sell gold at that fixed rate—that is the gold standard condition: or it may fix the amount of home currency it is willing to supply and allow the gold price (foreign exchange rate) to be adjusted to clear the market. In the former case the amount of home cash it creates by purchase of gold (or the amount it destroys by the sale of gold) is absolutely dependent on the international balance of payments—the central bank has no *control* at all. In this case it is a matter of indifference whether the central bank alone can monetize gold or there is right of free coinage—in either event the supply of cash is fixed independently of the central bank's wishes. We may say that it is desirable that the central bank should in fat years accumulate a gold reserve against the drain that is sure to come in lean years, when the balance of trade is unfavourable. But if the central bank is automatically to create cash as it receives the gold, the gold might just as well have gone to the commercial banks. The existence of a central bank does nothing to help.[2]

Of these two extremes the latter is not one that could be tolerated as a regular system. It is unthinkable that a country having such an appropriate institution as the central bank should allow the foreign exchange rates to

[1] Most of the minor central banks nowadays hold both gold and foreign exchange. Gold has the advantage that its value in terms of *other* foreign currencies is not subject to the behaviour of one particular foreign currency. On the other hand, if a country's obligations are largely in terms of a particular currency (e.g. sterling or dollars) it is advantageous to hold some of that currency rather than gold whose value in that currency may vary. Canada, for example, properly holds some sterling and United States dollars as well as gold, while Australia and India look mainly to sterling reserves.

[2] Indeed, it may make things worse: for in the absence of a lender of a last resort some of the stronger banks may take a long view and add to their ratio of gold to deposits in favourable years.

move up and down with complete freedom from intervention. However strongly opposition to the gold standard is argued, the case for some intervention to steady foreign exchange movements is unshaken. Yet once the central bank is prepared to intervene, it forswears some of its active control of the cash basis. For it can only intervene (abstracting from the possibility of exchange restrictions) by offering home currency in return for foreign currency, or by offering foreign currency for home currency. Once it does so intervene, the cash basis of the banking system varies with the excess of supply over demand for (or vice versa) home currency in exchange for foreign currency (at the rate at which the central bank decides to hold the market). The gold standard case is simply the extreme case in which the central bank holds the foreign exchange rate (gold price) fixed by absorbing all excess supply of foreign exchange or of home currency at that rate.[1] But whether this extreme position is adopted or not, it is inconceivable that a central bank should do otherwise than allow the volume of cash created by absorption of gold or foreign exchange to be determined by its foreign exchange policy.

Were variations in the balances of payments of these countries generally small this argument would not be of much account. But the opposite is, in fact, almost universally true. The countries we are considering are in general producers for export of a *few* primary commodities—either minerals or agricultural products or both. The total value of the exports of any one of these countries is therefore subject to extreme variations, thanks to crop variations depending on weather conditions, the exceptionally great price ranges which apply to nearly all primary commodities, and the lack of diversity in their exports by reason of which great disturbance in the total balance of trade

[1] From this point of view maintenance of a fixed par value under International Monetary Fund rules (see Appendix II) works in exactly the same way as a gold standard.

may be occasioned by collapse in a single market. This variability of exports is supplemented in its effect on the balance of payments by the tendency for long-term capital movements to be more or less parallel (perhaps with some time-lag) to the movements of exports. Prosperity of a country makes that country more attractive to investors and the inflow of long-term capital therefore has a natural tendency to be concentrated in years of favourable balances of trade.[1]

Given this extreme variability of the balance of international payments and a desire to steady (even if not to stabilize) the foreign exchange rates, a central bank must be prepared to absorb large amounts of gold (or foreign exchange) in the fat years and part with them in the lean years. One of the advantages of having a central bank in such countries has sometimes been stated as the desirability of having some institution whose duty it is to accumulate such a reserve against lean years—'a drought reserve' as it has been appropriately called in Australian discussions. But given a fixed exchange rate, there is no advantage in having a central bank to do it, *unless the central bank can 'sterilize' the foreign exchange movements by reducing its other assets as gold or foreign exchange flows in*, and vice versa. We are forced to the conclusion that, far from thinking of the central bank as being able to manipulate the cash basis by regulating its dealings in gold and foreign exchange, pursuit of its foreign exchange policy necessitates manipulation of its *other* assets.

Unfortunately, we have already examined those other assets and found that the power of the central bank to vary them is likely in practice to be extremely restricted. We

[1] There is some evidence that some of the countries are becoming conscious of the disadvantages of borrowing abroad up to the hilt in good times. The Australian Federal Loan Council, for example, appears to be anxious to prevent borrowing abroad from exaggerating the fluctuations in the balance of trade in the traditional manner. There is obviously scope here for some such special institution which will work in close co-operation with the central bank.

may now see how in time of prosperity it cannot be expected that the commercial banks will naturally be in debt to the central bank: for the favourable balance of payments will have led to the central bank absorbing gold, and the currency created in exchange will be used by the commercial banks to pay off their indebtedness to the central bank. Control of the situation by the central bank appears to be dependent on its power to *offset* gold movements, and the possibility of doing so by open market operations in the least analogous to the Anglo-American operations appears to be very slight.

What, then, is the use of a central bank? I believe that two important possibilities remain open even when a fixed exchange rate is being maintained; and when the exchange rate is not stabilized there is a further argument in support of the utility of a central bank. We have so far concerned ourselves purely with the possibility (but difficulty) of the central bank controlling the cash basis by open market operations of one kind or another. There remains open the possibility of securing a change in the composition of its liabilities. I am suggesting in fact that the central bank should be allowed to take advantage of its position as banker to the Government. If it cannot reduce its non-gold assets when gold is flowing in (or when for any reason it wants to contract the cash basis) it can restrict (or reduce) the cash basis by raising Public Deposits—the Government's balance. Government disbursements must fall short of government receipts. This cannot, of course, be done by the central bank on its own initiative—a serious limitation of its power. But it can be done with the co-operation of the Government—hence another argument for very close co-operation of the central bank and the Treasury.

It must be emphasized that these variations in Public Deposits must, if they are to be of any use, be produced by revenue surpluses and deficits and not by government debt operations. For if the Government can raise the level

of Public Deposits by issuing securities to the public there is no reason why the central bank should not itself sell part of its holding of government securities to the public —the absorptive capacity of the securities market is the same either way. And contrariwise for a reduction of Public Deposits by redeeming securities. If the public's holding of securities is subject to variability it is better that the central bank should take direct advantage without dependence on the goodwill of the Treasury. We have already suggested that ordinarily the variability of public security holdings is not great. The possibility I am suggesting entails not government debt manipulations but deficiteering and its opposite. And this is worth noticing for another reason: a government deficit makes for inflationary conditions, and a surplus for deflationary conditions, directly.[1] A time when the central bank is striving to check inflation (and therefore when an increase in Public Deposits is most useful to it) is just the time when a government surplus is most helpful to it. And similarly, when the central bank wants to check deflation a fall in Public Deposits and the appearance of a government deficit are both useful.

Yet in spite of all these difficulties in the way of manipulating total assets or the composition of liabilities, there remains one way in which the central bank can exercise authority. It can be given power, as has happened in New Zealand and in Australia,[2] to vary the ratios of the commercial banks' compulsory cash reserves to their deposit liabilities. The aggregate supply of money can be insulated from a rise in the cash basis by an appropriate rise in the

[1] If there is a government deficit, government demand for goods and services is likely to exceed the reduction in private demand enforced by taxation—total demand (government plus private) therefore tends to be excessive, i.e. inflationary. Correspondingly, a government surplus tends, by the excess of taxation over government demand, to a reduction of total demand.

[2] In Australia the Commonwealth Bank has power to vary 'special deposits' made by the trading banks with itself. These 'special deposits' are a kind of supplementary cash reserve.

legal ratios; and from a fall in the cash basis by an appropriate reduction of the legal ratios.[1] Save for its effect on the profitability of commercial banking (and its influence should generally tend to stabilize profits and so be acceptable) there is no possible objection to this course. It is accordingly a weapon which should always be placed in the hands of a central bank whose technique is circumscribed by the conditions we are assuming in this section. Given such power the central bank can perform useful functions that commercial banks cannot be expected to perform.

All this is equally applicable whether or not a fixed foreign exchange rate is maintained. But if the country without a central bank does not maintain a fixed exchange rate the establishment of some special institution which would have some functions appropriate to a central bank is likely to come sooner or later. For in the absence of any such institution the commercial banks will normally, for the conduct of their own business, hold reserves of gold and/or foreign exchange and they will generally be the main dealers in the foreign exchange market. But sooner or later the Government, acting supposedly in the interests of business activity, is bound to take an interest in the foreign exchange situation and to seek eventually to regulate the foreign exchange rates. This cannot be done properly without the co-operation of the commercial banks, and the latter may reasonably object to altering the foreign exchange rate at which they will deal in such a way as to impose great losses on themselves. The Government, or a newly adapted institution, must then be prepared to step

[1] This assumes that the commercial banks do not normally vary their cash ratios. In the absence of a short money market and a lender of last resort, banks in these countries have been used to seeing their cash ratios fluctuate widely; the establishment of the central bank as a lender of last resort should, in course of time, encourage banks to run down their local cash to a minimum; and if the central bank is given power to requisition the foreign assets of the commercial banks, its control is reasonably strong.

in and take over all foreign exchange reserves and take the entire responsibility for fixing the rate. This is what happened in New Zealand, for example, in the early nineteen-thirties, and events in Australia were much the same. Once this is realized the case for putting this rather specialized function of regulating the foreign exchanges into the hands of a central bank becomes much clearer. When the country does not maintain a fixed exchange rate the case for establishing a central bank may be based partly on this desirability of having some institution to regulate the foreign exchange value of the currency—always assuming that the authorities are unwilling to leave the foreign exchange market completely exposed to every wind that blows.

I myself am inclined to stress the value of what may perhaps be called the ancillary functions of the central bank—acting as the tool of foreign exchange policy and adviser on that policy, advising the Government on the economic effects of its financial policy, and co-operating in the regulation of the import and export of long-term capital. These functions can be more effectively exercised if the central bank is governed by men who can use the arts of persuasion. Persuasion can also help more directly, through the commercial banks. The central bank can influence the economic situation by operation on the rate of interest; but this influence works slowly and often but feebly. In the countries to which we are referring in this chapter a succession of good export seasons sets up powerful influences promoting inflationary developments—incomes of export producers rise and all too frequently a feeling of increased prosperity and confidence leads to a new generosity in government expenditure. In such an atmosphere the central bank can exercise a useful restraint if it can persuade the commercial banks to be exceptionally critical in their views of loan applications; this may have much more influence than any raising of interest rates. More effective still would be action in raising the foreign

exchange value of the currency, which would moderate the rise in incomes (in terms of home currency) of export producers. Manipulation of government taxation and expenditure can exert much influence. The inflationary progress can be moderated by checking any inflow of capital.[1] To forward these ends should be an important object of the central bank; and similarly it should strive for contrary developments as extremely important supplements to the expansive policy it should follow at other times, when extraneous causes have set up a deflationary movement.

For these reasons I think it important that these new countries should not be satisfied with the mere establishment of central banks on the (somewhat inappropriate) English or American pattern. They should endow their central banks with appropriate powers (especially the power to vary cash ratios) to control the supply of money. But they should go on to establish a network of machinery for monetary control—a network which will include the central bank as regulator of the supply of credit and of the foreign exchanges, a body for the regulation of overseas borrowing, and a Treasury which pays regard to the general economic effects of budget policy. Australia has gone farthest along this road: Canada and South Africa have still far to go. The connexion of budget policy directly with the whole field of government activities, and the connexion of the other functions mentioned above with the general welfare of the people, make it impossible to foresee successful establishment of such monetary control without there arising all sorts of constitutional questions about their mutual relations and their subjection to popular control. The solution of these constitutional questions must be contributed by the coming political generation if the theories of the economists are to be exploited to the full in these countries.

[1] This is, of course, a point against dependence on raising interest rates.

III. *Central Banking in a Primitive Banking System*

In the previous section we were concerned with the peculiar problems facing central banks where there is a good system of commercial banking but no good short money market. We now proceed to the central banking problems peculiar to those countries which have no well-developed network of commercial banks. Much of what was said in the previous section, and especially the last part, is applicable also to these more primitive countries. Indeed, much of the last part is applicable to all countries. But for the more primitive countries—India, China, and most parts of South America, for example—there are certain further considerations to which we now turn.

The essential peculiarity which distinguishes these countries from those we have already discussed is that they approach the extreme case of a central bank that has no banking system to control. The supply of money is composed mainly of cash—metallic currency, say. The influence of the central bank in the foreign exchange market then becomes perhaps its most important function, for there alone will it be able to influence the supply of money. But there are, I believe, other important ways in which the central bank can meet the peculiar conditions. It can *provide or supplement* the ordinary banking facilities of the country. Or it can merely encourage the development of an integrated commercial banking system. In exceptionally favourable conditions it may manage both to supplement existing commercial banking and to encourage its independent development. Provision of ordinary banking facilities and encouragement of the growth of an integrated commercial banking system should, however, generally be regarded as alternative policies. For while the first has as its end a system in which the central bank has *direct* control over the supply of bank money (since all, or a substantial part of all, bank deposits are its own liabilities), the aim of the second alternative is the development of a system in

which the central bank has only the indirect control which control of the cash basis gives.

Against a central bank policy of providing ordinary banking facilities is all the force of the opinion that the central bank should leave ordinary commercial banking business to separate institutions. But this notion is always supported by arguments which assume that there are already in existence commercial banks covering at least a large part of the field. There is, for instance, the argument that, as the commercial banks are obliged to keep balances at the central bank without earning interest on those balances, the central bank should not compete as a lender of funds with ordinary banks which have to go to some expense to obtain deposits. Such competition, if it is even suspected, is at once dubbed 'unfair competition'.[1] There is also the argument that, when the central bank acts as an ordinary banker to the public, transfers of money from a commercial bank's customer to a central bank's customer (or vice versa) disturb the supply of money. These arguments collapse entirely if there is no commercial bank in existence, and lose most of their force if the commercial banks cover only an insignificant part of the total field. But the former of these two arguments does imply a further proposition: that the development of independent commercial banking may be discouraged by central bank invasion of the field. If, therefore, we have any reason for preferring ordinary commercial banks, the central bank should encourage their growth rather than invade the field itself. The issue turns in fact on the question of the integration of banking systems.

In favour of complete integration of the banking system there is the very powerful argument that in an integrated system control over all banking operations is direct and not indirect. The force of the argument depends on the

[1] If the central bank alienates the commercial banks in this way (or, for that matter, in any other way), its use of the 'weapon' of persuasion will have small success.

inefficiency of indirect as compared with direct control. If we could assume that the commercial banks would always react automatically in precisely the right way to any central bank action, indirect control would be as good as direct control. But as has been seen at several points early in this book, no amount of regulation of commercial banking can guarantee invariably correct reaction. Even if they cannot lower the cash ratio below a legal minimum, the commercial banks can always raise it above that minimum and thereafter reduce it to that minimum. Central banking policy may sometimes require the commercial banks to expand (or contract) earning assets of one kind rather than another; but the system of indirect control does nothing to provide for such situations. London appears, since 1890 at any rate, to have learned that some of these deficiencies of indirect control can be overcome by informal co-operation between the various members of the system. Much has still to be done along this line: especially where, as in London, the central bank is so secretive. But obviously the further co-operation is developed the nearer does the system approach a formally integrated system. The great disadvantage of an integrated system is that the one bank, being conscious of its sole ultimate responsibility, may be too cautious to provide all the bank loan facilities which would be provided by specialist commercial banks. This disadvantage is the more serious the more important the outlet for commercial bank loans is in a country: the downward trend in the demand for commercial loans means that the disadvantage of integration of the banking system is becoming less. On the other hand, there is good ground for supposing that it is just in those countries—India, for example—of which we are thinking particularly that the outlet for commercial loans is greatest. Although they do not want wild-cat banks, India and China do want banks that will be prepared to support the activities of the people who have obvious ability but no good collateral security to offer.

The case for central bank development of ordinary banking business on its own account may be strongest in quite a different type of system. South Africa provides the extreme example of a country where practically all the banking business is in the hands of only two great branch banks. Neither of these banks confines its operations to South Africa; and neither is controlled absolutely by officers in the country. The limitation of competition arouses suspicion of monopolistic fleecing—and that by 'foreign banks'. Such is the strength of each of these two banks, and such is their temptation to act in concert, that they could frequently (if they chose) make the central bank's policy quite ineffective. Should that possibility be realized in practice there would be a very strong case for establishment by the central bank of numerous branches throughout the country in an attempt at once to break the 'monopoly' of these two banks and to secure some direct control over the banking operations of the country. The situation would be uncomfortable, but not impossible. Wise co-operation of the two commercial banks with the central bank would, of course, make any such development absolutely unnecessary.

There remains the question of what a central bank can do to encourage the development of a system of commercial banks. Here the possibilities are two. The first and much the more attractive course is provision and encouragement of the use of rediscounting facilities. The second and more remote possibility is the administration by the central bank of a subsidy for newly established commercial banks.

The development of rediscounting is important in a new banking system in that it enables banks to economize their till money without increasing the risk of being broken by a 'run' for cash. Since cash is a non-earning asset, economizing cash reserves implies increasing earning power. Growth of rediscounting facilities therefore acts in the same way as a subsidy; but it has the additional advantage

of developing contacts between the various parts of the banking system and making it easier for the central bank to enforce its policy. The central bank can do much in this way by selecting (and possibly securing the adaptation of) any suitable credit instruments already in use in the country (the *hundi* in India is an example), and offering favourable rates for cash obtainable on deposit of these instruments with itself. Sometimes there is room for reduction of stamp duties on such instruments, and then the central bank should do its best to persuade the Government to sacrifice revenue for the sake of promoting the development of the banking system. In countries like India and China, too, the central bank must be prepared to open numerous branches (or attractive agencies)[1] in order to provide assistance quickly and easily to new local banks. Unfortunately there is almost universal prejudice against rediscounting, as it was generally regarded as a sign of weakness. The central bank should make it its business to persuade bankers that rediscounting is not necessarily an evil practice.[2]

If the Government is willing to bear the expense the outright subsidy method may be employed. If so, the central bank is the obvious agent for administration of the subsidy: for compulsory inspection powers would be a decided advantage in developing its contacts with newly established banks. It might be difficult to discriminate between new banks and those already well established without encouraging the growth of a unit-banking system rather than a branch-banking system; but I believe this difficulty could be overcome. However, detailed discus-

[1] I insert the adjective 'attractive' to exclude the use of agents to whom new banks are unlikely to go in search of aid. Branches of the Imperial Bank of India (a predominantly European institution) do not seem ideal agencies for the Reserve Bank of India, if the latter wishes to encourage the growth of indigenous banking.

[2] If bills of exchange or some analogous instruments are not in use, rediscount facilities are, of course, pointless. For this reason new central banks have sometimes (notably in South Africa) attempted to encourage the use of bills, but such attempts have met with little success.

sion of this possibility seems rather waste of time when we remember that in the countries of which we are thinking there are generally many more pressing needs to be met out of the scant government funds. All that the Government can reasonably be expected to do is to reduce stamp duties on particular credit instruments, at the suggestion of the central bank.

But I believe that much can be done without great expense if the central bank makes up its mind to encourage the growth of commercial banking; and once an adequate system of commercial banking has developed the problems of control faced by the central banks become those which we have already discussed. If progress is to be real, it must be based on a thorough understanding of the problems rather than on a slavish imitation of what has been done in the countries whose financial institutions happened to develop first. In the inter-war period a number of factors conspired to make some of the 'new' countries rush into the establishment of central banks, and only gradually are they beginning to realize how essentially different are the financial climates in which these new institutions are functioning. The 'new' countries alone cannot be held responsible for their misunderstandings: they often took British and American advice based more on familiarity with the City and Wall Street than on fundamental analyses of banking problems. Since then we have both lived and learned.

13

SOME REFLECTIONS FOR THE MONETARY THEORIST

EVERYONE who tries to explain how our daily bread, with its varying thickness of butter, emerges from the economic machine is an economic theorist, good, bad, or indifferent. And among economic theorists nearly all strive to understand the part played by monetary factors; and these people are the monetary theorists. It is for these monetary theorists that this chapter is written. Through successive chapters of this book an attempt has been made to explain stage by stage what the monetary institutions are and on what principles they work. It is now time to draw together various strands in an endeavour to throw light on the monetary theorist's central question: how do the monetary factors affect the success of man's struggle to wring a livelihood from the natural and other resources that today inherits from all our yesterdays?

By 'the monetary factors' we mean the monetary institutions—some but not all of the institutions commonly called 'financial institutions'—and the principles that govern their operations. The literature of the business cycle has put the monetary factor in the dock, and has framed a weighty indictment: though relatively few writers on the business cycle have gone to the extremity of ascribing the chronic instability of modern economies primarily to monetary origins, almost if not quite all of them have fastened upon money some responsibility for aggravating both upswing and downswing of the cycle. Bankers, it is argued, share the business men's optimism in the boom and expand their loans freely, so adding to the money flow and forcing prices up yet faster; in the slump, bankers are frightened and, contracting loans, reduce the supply of money and so depress the already unduly low price level.

'The monetary factor' makes the boom more fantastic and the slump deeper.

Various circumstances supporting this simple view have emerged at many points in this book, but the reader who has been patient enough to survive to this concluding chapter will also be aware that many complications have to be taken into account. Particularly do these complexities have to be borne in mind if we are interested not merely in the crude elasticities of the banking system but also in the rapidity of its reactions—in other words, in the length of the time lags. As the theory of the trade cycle comes to hinge more and more upon the implications of the various lags in the economic system,[1] it becomes important to consider rather carefully just what are the rigidities and the elasticities in the monetary system, and how rapidly or slowly their full force emerges.

It is against this background that I want now to consider how monetary institutions have been developing during this century and what are the most important implications of these developments. As in the book as a whole, my attention is mainly directed towards English institutions, but I hope that an occasional comparison with those of other lands will not be unfruitful.

The important changes in the English banking system in the present century can be narrowed down to three: the concentration of ordinary banking business into the hands of a few giant but competing firms, the relative decline in the demand for ordinary bank advances coupled with the glut of government paper, and the revolution in the Bank of England's practice in regulating the cash basis. All other changes stem from one or more of these three basic changes, and the habits of English bankers today are already rooted almost as deeply in these novelties as in the wisdom of their forefathers.

The process of concentration in English banking is

[1] For a very recent view see Hicks, *A Contribution to the Theory of the Trade Cycle*.

almost as old as English banking itself, but it was for long held in check by the legal privileges of the Bank of England, and it was not until after 1857 that it gathered any appreciable impetus. Further acceleration of this process was one of the curious by-products of the Baring Crisis of 1890, and it reached its culmination with the emergence of 'the Big Five' in 1917–18. Since then, although there has been no legal restriction upon amalgamation, further steps have been watched by the Government and it has been an understood thing that no amalgamation of one giant with another could be tolerated. The position through the second quarter of the century has therefore been that there have been a few giant banks, each one with branches spread thickly over most of the country, each one knowing that it might lose business to one of its great rivals and each one knowing that it was idle to aim at, or to hope for, amalgamation with any of its rivals. It has also been necessary for the bankers to bear in mind that, after the 'Money Trust' scare of 1917–18, open price agreements (agreements about rates of interest) were potential political dynamite, and that any behaviour that might be represented (or even misrepresented) as anti-social would stimulate the threat of nationalization.

In these circumstances of sensitive oligopoly, a good deal of tacit understanding as to prices has been possible, but there has also persisted a very high degree of competition—not of a cut-throat kind (that would be pointless, when the government denied all opportunity of buying out or eliminating a defeated rival) but gentlemanly competition in offering the public variety of service and more and yet more convenience, coupled with a pretty keen searching out of the profitable advances business.

In this last, the behaviour of the banks has been the outcome not only of structural consolidation but also of our second factor—the change in the assets structure arising from the relative fall in the demand for advances coupled with the glut of government paper forced on the

banking system by the financial exigencies of two world wars. The causes of this change in the assets structure and its implications for earning capacity have been discussed in Chapter 9. Here we must note that one of its results is that the banks are much less illiquid than they would be willing to become, and that the urge to avert falling profits pushes them all the time—through good and bad trade alike—in the direction of expanding ordinary business loans.[1] This is, for the present purpose, our first important conclusion—that there is always such excess liquidity in the commercial banks that we can find in their balance-sheets no automatic check on inflationary booms. This contrasts with the position in England in the first quarter of this century, when the larger banks normally had Advances–Deposits ratios running up to 55 or even 60 per cent., at which point they felt their liquidity strained so that, unless a bigger cash basis could be drawn into existence, an unwillingness to increase loans *automatically* appeared. This automatic brake still operates in other countries where the banking system is normally fully 'loaned up'—i.e. where the Advances–Deposits ratio is normally about as high as the bankers wish to see it go. Even in the United States today, where the commercial banks *as a whole* have excess liquidity comparable to that in England, many individual banks have Advances ratios running almost as high as comfort allows and, there being only imperfect competition between banks (especially because of their geographical dispersal), the appearance of the automatic brake in some banks is not compensated by continued willingness to lend freely in other banks.

The unduly low Advances ratio has other effects too. In these circumstances the primary object of the bank manager must be to get more Advances business, and it is directly or indirectly in pursuit of this aim that the peculiar

[1] The English banks still sometimes feel themselves fully 'loaned-up' in particular directions (e.g. the film industry or building development in a particular area).

oligopolistic competition between the banks shows itself. Given the competition between giants, the knowledge that rivals cannot be forced out of existence, and, above all, the nature of the business, competition does not on the whole show itself in price cutting. There is, of course, some price cutting—fine rates are quoted for big business known to be ready to move elsewhere, and this willingness to prune rates competitively has been responsible for a gradual breakdown of the old 5 per cent. minimum during a long period of years. But this pruning has been very slow, very piecemeal, and very quietly achieved. In general the English bank manager takes the line that he needs to be satisfied that the business is 'sound',[1] and if he is so satisfied he will provide the necessary loan at a conventional price: he will not be interested in offering a competitive quotation. But the bank is very much interested in putting itself in a position where expanding business in loans will come to it—it pushes out its branches as closely as possible to the doorsteps of potential customers, it offers more and more elaborate services, and it undertakes much unremunerative business selected (as well as general rules allow) on the old principle of giving a sprat to catch a mackerel. Also the organization of the banks is made to turn, in quite noticeable ways, on the seriousness of the step of refusing a customer's request for an Advance.

All this has two important implications for the monetary theorist: bank interest rates are sticky, and there is always a pressure to push Advances upwards. In so far as rates of interest are effective weapons for influencing economic activity, the banking system's leaning towards rigidity of rates is a limiting factor in anti-cyclical policies. At the same time, the anxiety to push Advances all the time acts on the right side in a slump, and on the wrong side in a boom.

There is a further important result of the competition

[1] I return to this aspect below.

for Advances business. The banks have tended, under pressure of this competition, to widen the scope of their Advances business. This tendency has perhaps been accentuated by the long record of successful banking that now stands behind all the English banks. They have, of course, burnt their fingers quite badly sometimes in the present century—in cotton, steel, and shipping business after the First World War, and perhaps in real estate and some other directions in 1929; but in general they have had a pretty good record of avoidance of large-scale bad debts. So their old principles restricting loans have been modified somewhat. The former stress on the 'self-liquidating' character of a transaction to be financed has given way a little to emphasis on the 'temporary' nature of the financing —something that is rather more different than it looks at first sight. The archetype of the self-liquidating transaction is the purchase of primary materials for shipment to a country where there is an assured market, and this was, of course, the basis of the central place occupied by the bill of exchange in the development of the English system during the nineteenth century. 'Temporary' finance, on the other hand, can mean the temporary financing of fixed capital construction pending the raising of long-term capital—and such temporary financing can be allowed to go on for a very considerable period until security markets are peculiarly favourable to the particular borrower.[1]

When he looks at a transaction upon which his forerunner would have frowned,[2] the contemporary English banker is, of course, very cautious, and particularly he will want to know all he can about the borrower's business, and he will want to trust his man. But, subject to these considerations, he will in fact be willing to participate in

[1] The English banks generally emphasize the temporary nature of their help by making Advances subject to automatic review after twelve months.

[2] I do not wish to exaggerate this generalization about the attitude of nineteenth-century bankers. The occasional venturing of many of these into the financing of fixed capital is well known to all historians of banking.

(not to finance exclusively) the financing of new capital ventures. New 'long-term capital' will in fact be forthcoming at the bank.[1]

The change in the attitude of the banker towards an Advance proposal has also its bearing on the question of collateral security. A good commercial banker operating on the nineteenth-century principles will attach importance to collateral security, and variations in its marketable value will have important influence on the amount the banker is willing to lend. In the United States this holds good today, at any rate over a wide part of the field.[2] But in contemporary English banking collateral security, though still taken in a large proportion of cases, does not play its former critical part. The attitude of the English banker is rather that he will look at his client's business plan (his 'venture' in the old sense) as a whole, will consider its soundness as a business proposition, and will in effect say to the client, 'Now how much bank finance do you need to see the thing through properly?' Having sized up the proposition and knowing his man, the banker will lend the required sum; and will take what collateral security the client can conveniently offer *without worrying greatly about the relation between the sum to be borrowed and the market value of the collateral.*[3] That is to say, if the venture appears, to the banker's satisfaction after full inquiry, to need help from the bank to the amount of £5,000, and the banker believes it sound and trusts his man, he will agree to lend £5,000 (at a conventional rate of interest), and then

[1] I do not imply that there was no 'Macmillan gap' before the new finance corporations were founded (or indeed that there is none now that they have been established), but only that there has been no relevant difficulty in getting loan capital at the banks. The 'gaps' in the capital market relate rather to ordinary share capital, without an adequate basis of which neither will lenders lend nor will good borrowers borrow.

[2] It duly played its damaging part in the Wall Street boom of 1928–9.

[3] In certain classes of business (of which loans for the purchase of private dwelling-houses is probably the chief) the old rules, tying the amount of the loan to the market value of the security, are still fairly rigidly applied.

take what collateral he can get, without much bothering whether the current market value of the security offered is £4,000 or £6,000, or even £2,000. This has the important implication, for our present purpose, that a rise in security prices (falling rates of interest) will not, in English conditions, make the banker consciously willing to lend more for particular ventures. There may be some slight unconscious effect and, in particular, new proposals may be so affected; but in general we may say that rising security values will not automatically make bank loans *much* easier to obtain than they were before, and that falling security values will not make bank loans *much* less available than before.

This analysis does, of course, imply that the banker's judgement of each venture is of great and direct relevance to the availability of bank loans, and this means that the door is open, wide open, for the general state of business optimism or pessimism, penetrating the bankers' parlours, to affect directly the availability of bank loans. Now that bank advances are less conditioned by liquidity strains in the banks and are much more dependent on the subjective judgements of bank managers, the elasticity of the monetary system—the ease with which it copes with the demands of rising trade, and its readiness to contract in time of falling trade, without setting up any powerful compensatory forces—is great indeed.

The third factor of change—the revolution in the Bank of England's practice in regulating the cash basis—works in the same direction. In the old days, when the cash basis was tied (however loosely) to a gold base, the tendency of expanding trade and rising prices was to set up strains in the banking system. The complexity of these strains was altogether underestimated in the classical Reports on English monetary affairs, due principally to an unduly simple view of the working of the international gold standard in pre-1914 days.[1] But, although it was not with the

[1] See an illuminating article, 'The Working of the Pre-war Gold Standard', by P. B. Whale, in *Economica*, Feb. 1937.

simple automatism that used to be supposed, it was undoubtedly in a broad way the case that cyclical movements in trade did set up strains on the cash position that automatically put the brake on trade expansion or recession. It must not be supposed that these strains were concentrated on the availability of bank advances: an examination of English banking statistics (such as they are) shows that often the temptations of booming trade would induce bankers to go on expanding Advances, maintaining their cash (but compromising their liquidity in a wider sense) by selling 'Investments'. These sales of Investments, of course, helped to depress the gilt-edged market—that is, to force rates of interest up. Similarly, in a slump the bankers would partially compensate themselves for the fall in the demand for Advances by buying securities—forcing rates of interest down.

Much of this automatic braking on the trade cycle is lost in the contemporary system because, though the official peg in the interest-rate structure is confined (in England but not in the U.S.A.) to the very short rates, the inexhaustibility of the cash supply through the ever open back door frees the banks from much of the strain that used to exert pressure on the longer-term interest rates. The banks can now get just what cash reserves they choose to have: and so can make the total of deposits just what they choose. In fact, given the attitude of the Bank of England, the volume of deposits is now affected by the movement of funds to and from the government, the movements to and from operators (traders and others) outside the system, the disposition of the public to hold money rather than securities, the disposition of the banks themselves to buy or sell securities[1] and the amount that banks are lending to customers. If the demand for advances is rising, the

[1] To be precise, we must remember that the Bank of England's own disposition to buy or sell securities (other than Treasury Bills) must be included here; and it is only by varying this disposition that the Bank of England can itself alter the volume of deposits. (See Chapter 5, pp. 119–23 above.)

banks can lend more *without contracting their holdings of securities*, because they can get the extra cash as basis for the extra deposits simply by turning in at the Bank of England's back door some of the Treasury Bills *of which they have a plethora*. The rising demand for Advances thus fails to set up the stiffening of interest rates that might check the inflation. This process can go on unchecked (provided the Bank of England does not change its technique) until the commercial banks get worried about the rise in their Advances–Deposits ratio and the fall in their Money Market Assets–Deposits ratio. And disturbance of the liquidity position of the banks is not in sight at present.

Actually the contrast between the new system and the old may be even greater. For, provided they have such a plethora of Treasury Bills that they can expand the cash basis more than enough to compensate for rising Advances, the commercial banks may take the view that, with their rising total resources, they can comfortably extend their Investment portfolios somewhat. Then they buy securities simultaneously with the expansion in their Advances—perhaps going so far as to maintain their Investments–Advances ratio. Their pressure to buy sends interest rates *down*—in direct contrast to the event under the old system.

The opposite event—a *fall* in Investments simultaneously with a fall in Advances in time of slump—is not so likely. And even the case we have just considered, where rising trade demands may exert a *downward* pressure on interest rates, is perhaps not in practice a probable condition. For English bankers, for all the changes, are still influenced by some of the old conditions, and the experience of the last ten years has shown that the belief (founded on the facts of earlier conditions) that booming trade means higher interest rates dies hard. So, when the demand for Advances is rising fast, bankers hesitate before adding to their Investments. The cushion of secret reserves that protects their balance-sheets from the consequences of capital depreciation is not so very fat (in relation to the

total Investments involved) and if the brisk demand for Advances is associated in their minds with any hint of rising interest rates they will prefer to stand aloof from the gilt-edged market. At least, their purchases there will be restrained. Even so, the upshot is very different from what it would have been in the days when the source of cash was not a widow's cruse.

Thus the new technique of the central bank, both here in England and across the Atlantic, does leave the monetary system very much more elastic than it ever used to be. The moral of this is—or so it seems to me—not to return to the old system, nor yet to devise new rules of thumb such as the principles of 1844 or the 100 per cent. money of Chicago a century later. Rather the moral is that we should use our new freedom sensibly. The central bank has not divested itself of all power. It can still operate on the supply of money by operating in securities other than those money-market assets which it takes in automatically at its own back door. And, as we have seen in Chapter 8, its resources for these operations can be substantially reinforced, and it should be possible to use them more in accordance with the recommendations of the Macmillan Committee and to better purpose than in the ill-starred episode of 1946–7. The greater elasticity that the system has today affords the opportunity for more deliberate manipulation of the monetary system—for inserting rigidities *ad hoc* in order to influence the level of business activity. But if this discretionary action rather than rule of thumb is to be our policy, the task of diagnosis becomes of the first importance and the need to understand the mechanism is hardly less. And if the central bankers are to be successful in their efforts, it is desirable that the operations of the monetary authorities should command the support of an informed and understanding public both inside and outside the City of London.

APPENDIX I

THE INTERNATIONAL MONETARY FUND

1. THE International Monetary Fund, or 'I.M.F.' as it is frequently called, is one of the two international institutions brought into existence after the Bretton Woods Conference of 1943. It has certain functions of a banking character, and a book on the subject of banking is therefore not quite complete without some reference to it. Organized and operating on the international plane, it affords short-term loan accommodation to countries that undertake to conform to a code of reasonable behaviour in the field of foreign exchange policy. After the discouraging experience of the nineteen-thirties, completely independent national conduct of monetary affairs was discredited, but scarcely any country was willing to submit itself to the discipline of an international gold standard, and the I.M.F. resulted from a groping after some middle way between these two extremes.

The Articles of Agreement of the I.M.F. centre round four purposes: (1) They set out a code of monetary behaviour, to which the signatory countries undertake to conform; (2) they provide facilities, of a banking type, to enable particular countries to overcome temporary balance of payment difficulties without upsetting the behaviour code; (3) they make some provision against difficulties common to many countries at the same time; and (4) they establish an international institution that ensures informed publicity and provides for constant consultation. Underlying it all is the grand design of getting the advantages without the disadvantages of the gold standard.

2. The code of monetary behaviour centres round the concept of the *par value* of a currency. Each country has to agree with the Fund (i.e. with the other member countries) a *par value* for its currency, in terms of gold. This par value may be changed only for one purpose—to correct a *fundamental disequilibrium*. Broadly speaking, it is supposed (for reasons that can be found in books on the theory of international trade) that the general circumstances of relative price levels, demands for the products of different countries, and other such factors will make one foreign exchange value of that currency *right* in the sense that that rate will tend to

make the balance of payments balance without resort to any extraordinary measures. This 'right' rate of exchange is the equilibrium rate, and if the par value is different, then there is a *fundamental disequilibrium*. Thus if there is a fundamental disequilibrium, the rate of exchange is an uncomfortable one—the country's balance of payments is in an unhealthy condition. A country may therefore, says the I.M.F., propose a change in its par value in order to remove unhealthiness in its balance of payments.

Countries abjure completely the right to change the par value for any other purpose; and one of the most objectionable other purposes, competitive depreciation, is thought so grave a sin that it is singled out for specific prohibition in the Articles of Agreement. But even when it can plead a fundamental disequilibrium a country may not unilaterally change its par value to any extent it chooses. It is bound to notify and consult the Fund. If the proposed change, together with all previous changes, is less than 10 per cent. of the original par value, the Fund cannot object. If the proposed change, when added to all previous changes, would take the par value more than 10 but less than 20 per cent. away from its original level, the Fund may concur or object, but must give its answer within three days if asked. If the proposed change is bigger than this, the Fund may demand a longer period for consideration, and may concur or object.

It is implicit in the Agreement that the Fund must agree to a proposed change if it is designed to correct a fundamental disequilibrium. The point of consultation with the Fund is therefore the obligation it puts upon the country to justify its proposal by convincing the Fund that there really is a fundamental disequilibrium. Membership of the Fund therefore implies just as much foreign exchange stability as under the gold standard, except that (and it is a big exception) a country may change the foreign exchange value of its currency if it can convince other countries that a different rate would better fit the basic international trading conditions.

This part of the Agreement received its most severe testing in September 1949, when first sterling and then a number of other currencies were sharply devalued. Owing to the embarrassments of speculative operations it was essential to preserve very close secrecy about the British move until the last minute, so that there was scarcely any time for effective consultation between countries.

It so happened that there was, long before the change, widespread belief that there was a fundamental disequilibrium and that the British and many other par values ought to be changed; but there was no crystallization of opinion about the *extent* to which sterling should be devalued. The actual change (of about 30 per cent.) proposed by Britain came as a surprise to many countries, and the fact that there was no time for argument on this point made certain countries feel that, while there could be no doubt about Britain's right to devalue in the face of the acknowledged fundamental disequilibrium, they had been 'bounced' into acceptance of a devaluation more sharp than they might, on due deliberation, have agreed to be appropriate.

3. The second principle in the code of behaviour is that the agreed par value should not be rendered ineffective by either (*a*) multiple exchange rates, or (*b*) dealings in gold at prices other than those indicated by the par values.

The prohibition of multiple exchange rates means that all transactions between one country's currency and the currency of any other member country must go through at that single rate of exchange which alone fits the par values agreed with the Fund. By infringement of this rule—by allowing some transactions at different rates of exchange—a country might enable its traders to compete more sharply in international markets although it had not justified such a development by proving fundamental disequilibrium in its balance of payments. The practice of multiple exchange rates is, that is to say, a covert method of 'competitive depreciation', open resort to which is forbidden.

The purpose of the rule about dealings in gold is precisely the same. The par values are fixed in terms of gold, and if countries deal openly in gold at prices other than those indicated by the par values, they open to their people the possibility of settling foreign trade transactions through operations in gold that imply exchange rates other than the agreed par values.

4. The third point in the behaviour code is the limitation (not prohibition) of the use of foreign exchange controls. The general principle adopted is that ordinary trade and other current transactions—tourist expenditure, interest payments, and so on—should be unrestricted. This is all part of the plan for making the agreed par values genuinely effective rates: the trader who can compete, on the basis of the agreed par value, must not be defeated

by finding that he is not allowed to buy or sell the foreign exchange to complete his transaction. On the other hand, members are allowed at all times to control international capital movements. This is an important concession, because it allows countries to prevent those short-term capital movements (the 'hot money' movements) that were so disturbing in the inter-war period. But permission to control such capital movements does not derogate in any way from the underlying purposes of the Fund. It is not a concession to human weakness, but simply a qualification that still leaves traders competing fairly on the basis of the agreed par values.

There are two exceptions to this rule of 'no restriction of current transactions'. The first is the 'scarce currency' exception, to which we shall have to return below. The other is the *Transition Period* exception. The I.M.F. Agreement recognized that in the early post-war years—labelled the Transition Period—many countries would be in a position too desperate to allow even current transactions to go uncontrolled; and during these years Foreign Exchange Control of current as well as capital transactions is tolerated. This exception is a concession contrary to the general principles of the Fund, but was embodied in the Agreement because without such toleration most countries could not have joined the Fund at all. The concession has been a damaging one —more damaging than appears at first sight, because it is only behind the shelter of tight foreign exchange controls that the practices of multiple exchange rates and gold-price 'wangles', referred to above, are easy.

5. The Fund's second purpose is to afford facilities, of a banking type, to enable particular countries to overcome temporary balance of payment difficulties without upsetting the behaviour code. A country has always to balance its balance of payments somehow: the market demand for and supply of foreign exchange must somehow be equated—by reducing imports and stimulating exports (either by altering the exchange rate or by other means), by borrowing, or by cutting off part of the demand by foreign exchange controls. But many of the methods that could theoretically be employed conflict with the code of behaviour adopted by the Fund—a merely temporary difficulty cannot, for example, be pleaded in justification of a depreciation of the exchange rate, and resort to exchange control is hedged about. The Fund therefore

in effect says that it will, to help a country to maintain conformity with the code of good behaviour, lend to it foreign currency to enable it to tide over temporary trouble.

The amount of possible borrowing by a country from the Fund is related to its *Quota*. The quota was fixed (by political negotiation) for each member when or soon after the Fund was established, and it has some relation to the country's international trading turnover. Each member had to pay its quota, as a subscription, to the Fund, partly in gold or U.S.A. dollars and partly in its own currency. In this way the Fund acquired a stock of gold and of U.S.A. dollars and of all other members' currencies. The U.S.A. quota is the largest and was, of course, paid entirely in gold and U.S.A. dollars. Added to the gold and dollars that the other members had to subscribe (as parts of their quotas) this was enough to provide the Fund with $3\frac{1}{2}$ billion dollars in gold or U.S.A. dollars: a large amount until compared with the dollar deficits of post-war Europe (estimated at an annual rate of about 5 billion dollars when Marshall Aid began in 1948).

A country is allowed to borrow from the Fund (in form by purchase against promise of resale) foreign currencies up to one quarter of its quota, in each year. The amount of any currency that can be acquired by the Fund is limited to twice the quota of the borrowing country, and this provision restricts the borrowing by that country to rather more than the amount of its quota, except in so far as other countries are borrowing its currency from the Fund. (The Netherlands, for example, borrowed sterling from the Fund and this, reducing the Fund's holding of sterling, left room for bigger sales of sterling by Britain to the Fund when Britain wants other currencies.)

These loan arrangements are like bank loans, in that they are intended solely as temporary palliatives. A big agricultural producer, for example, might find itself in temporary difficulties owing to drought, and then the failure of its exports could be made good by borrowing (buying other currencies against promise of resale) from the I.M.F. Again, Britain was allowed to borrow in 1947 because she had not had time to switch her resources adequately into export industries, and needed relief while her exports were developing. The help afforded by the Fund can thus be very important in enabling countries to get over temporary difficulties without resorting to beggar-my-neighbour actions of

the kind abhorred by the Fund. Refusal of these loan facilities is the sanction by which the Fund perhaps hoped to deter members from breaking the rules of the new game. In practice, the sanction has not proved powerful enough—but that is a long story.

6. The third purpose of the Fund is to provide against the contingency of difficulties not for one or a few countries, but *for many at once*. First, there is provision that all par values may be changed together—i.e. the price of gold may be raised in every country at once, by the same percentage. This is designed to cover the contingency of a general deficiency in the supply of gold—a contingency that bothered people in the 1880's and again in the inter-war period.

Secondly, under this head, there is the *Scarce Currency* Article in the Agreement. This provides for the contingency that many countries may be continuing to borrow one currency from the Fund, because the country of that currency has a chronically favourable balance of trade. In such an event, say, relating to U.S.A. dollars (the practical case) the Fund would eventually run out of dollars and gold. The Fund may then try borrowing more dollars from the U.S.A. Then, if the dollars still look like running out, it can formally declare dollars a *scarce currency*. The Fund proceeds to ration its loans of the scarce currency, and every member which, because of this rationing, fails to get all the dollars it needs, may impose foreign exchange restrictions on current as well as capital transactions in the scarce currency. (This is the case referred to on p. 312 above.) Even in this case the permitted exchange restrictions are hedged about with several qualifications.

The usefulness of the Scarce Currency clause is narrowly limited by the fact that countries are allowed to borrow so little each year that it would take nearly four years for dollars to become technically scarce. Consequently, although there has been universal awareness ever since the war of the actual chronic scarcity of dollars, the Scarce Currency clause, with its various remedial provisions, cannot come into operation for some long time. This is a very real defect, and is one of the ways in which the Fund's Articles just do not measure up to a major world problem.

7. Lastly, the I.M.F. Agreement establishes both regular and *ad hoc* consultation by nations about their monetary affairs, and a

powerful secretariat which marshalls and interprets the relevant information and leaves no government with the excuse that it did not know what was happening or did not think it necessary to tell anyone what it was doing. Foreign exchange policy has to be explained and defended before a competent world opinion formulated in the I.M.F. organization in Washington. In connexion with every one of the operations arising under the provisions already described, there is provision that there must be consultation with the Fund, that reports shall be published, &c. In this aspect of its work, in the building up of a genuinely international bar of authoritative opinion, the Fund has been fortunate in having as its Managing Director M. Camille Gutt, who by sheer force of clear principles and complete integrity of character and purpose has driven his way through some extremely difficult situations.

8. All I.M.F. operations in sterling—when it lends dollars to Britain, or when it lends sterling to other countries, or when its loans are repaid (i.e. when it repurchases other currencies from Britain, or sterling from other countries)—all these operations touch the English banking system via the Exchange Equalization Account and the Bank of England. Britain's quota was paid partly by release to the I.M.F. of gold or U.S.A. dollars previously held by the Exchange Equalization Account, and partly in sterling. The latter took the form of special non-interest bearing IOUs of H.M. Treasury, and these the I.M.F. can turn into usable English money by selling to the Bank of England, the latter thereby adding (*a*) to its holding of British Government securities, and (*b*) to its liabilities to 'Other' Depositors—under *Other Accounts* in the Bank Return.

When Britain 'borrows' from the I.M.F., it hands sterling (in the shape of the special Treasury IOUs) to the I.M.F. and receives dollar balances in New York. These dollar balances are simply an addition to the Exchange Account's holding of dollars, and their use to finance an adverse balance of trade has the same impact on the English banking position as that of the use of any other dollar balances. (The process is described in Chapter 6.) Similarly, a repayment of dollars (when it happens!) will involve simply a payment to the I.M.F. of some of the E.E. Account's dollar balances in New York, and receipt of special Treasury Notes or Bank of England 'Other Deposits' previously held to the

credit of the I.M.F. The interesting impact on the banking position comes at an earlier stage—when the E.E. Account is accumulating the dollar balance as a result, for example, of rising British exports; and this impact follows the rules fully analysed in Chapter 6. And many of the most important aspects of the I.M.F.'s career fall quite outside the scope of this book.

APPENDIX II

THE INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

THE second of the twin institutions that emerged from the Bretton Woods Conference is the International Bank. Like the International Monetary Fund, the Bank has a Board of Governors and Executive Directors, some being nominated by the largest participants and the others elected by the smaller participants. The Bank's purposes are stated in Article I of the Agreement establishing it:

I. To assist in the reconstruction and development of territories of members by facilitating the investment of capital for productive purposes, including the restoration of economies destroyed or disrupted by war, the reconversion of productive facilities to peace-time needs and the encouragement of the development of productive facilities and resources in less developed countries.

II. To promote private foreign investment by means of guarantees or participations in loans and other investments made by private investors; and when private capital is not available on reasonable terms, to supplement private investment by providing on suitable conditions finance for productive purposes out of its own capital, funds raised by it and its other resources.

III. To promote the long-range balanced growth of international trade and the maintenance of equilibrium in balances of payments by encouraging international investment for the development of the productive resources of members, thereby assisting in raising productivity, the standard of living and conditions of labour in their territories.

IV. To arrange the loans made or guaranteed by it in relation to international loans through other channels so that the more useful and urgent projects, large and small alike, will be dealt with first.

V. To conduct its operations with due regard to the effect of international investment on business conditions in the territories of members and, in the immediate post-war years, to assist in bringing about a smooth transition from a war-time to a peace-time economy.

The Bank has an authorized capital of about $10,000 millions, subscribed by the member countries in proportions settled in much the same way as that in which the Quotas in the I.M.F. were settled. Only one-fifth of this capital is called up for loan operations. The remaining four-fifths are left uncalled, for guarantee purposes. Of the one-fifth paid up, nine-tenths were subscribed

in the members' own currencies and the remaining tenth in gold or U.S.A. dollars. This meant (allowing for the fact that the U.S.A. subscription was entirely in gold and U.S.A. dollars) that the Bank commenced operations with about $700 millions in U.S.A. dollars and gold (which nearly everyone would have liked to get hold of) and about $1,200 millions' worth of other people's currencies (which hardly anyone wanted). The $700 millions were therefore the effective loan fund of the Bank—a figure comparable to the value of one month's imports into the United Kingdom.

The remaining four-fifths of the Bank capital was, as was noted above, left uncalled, being reserved for guarantee purposes. The need for some provision of this kind arises from the fact that the Bank may, besides lending out its own resources, enter into commitments of two other kinds:

(*a*) It may borrow currencies (e.g. U.S.A. dollars) in the local money-markets, and lend them out to other people.

(*b*) It may guarantee loans made by other parties—governmental or private—to desirable borrowers.

In both these operations the Bank in effect stands as guarantor between a borrower and some other lender and, if the borrower defaults, the Bank may have to call upon members to pay up some of the hitherto uncalled portion of their subscriptions, to cover the default. The fact that the Bank can in this way call upon members to put up more money gives substance to the Bank's guarantee—it makes the guarantee worth having, and therefore enables the ultimate borrowers to get capital they otherwise would have failed to obtain. The Bank has in fact exercised its power to borrow currencies, particularly dollars in the U.S.A. markets, and smaller amounts in certain European countries; and these amounts have added appreciably to the $700 millions that formed its main original effective loan fund.

One important principle embodied in the Bank's rules is that no loans made or guaranteed by it may be 'tied' to the purchase of goods in particular countries. This expresses the multilateral spirit underlying the entire Bretton Woods deliberations.

In many ways the Bank's powers are hedged about in the interest of the members as subscribers of its capital. In the first place, it is to guarantee loans by others rather than make loans

itself, resorting to the latter course only where the borrower has been unable to find a reasonable lender elsewhere. Secondly, whether a direct loan is made or only a guarantee is given, the government of the member country receiving the loan (which can be to a local government authority or to a private firm, as well as to a national government) must itself guarantee the loan. Thirdly, the Bank's guarantee is not available unless the borrower has been able to show inability to obtain a loan on reasonable terms without the guarantee. Lastly, the borrower must appear after proper examination likely to be able to meet his obligations—i.e. the Bank's resources cannot be used for gifts publicly described as 'loans'.

The interest charges on direct loans are left to the discretion of the Bank. Commission rates for guarantees are, during the Bank's first ten years, limited to a range of 1 to $1\frac{1}{2}$ per cent. a year. All charges are payable in the original currency of the loan or (at borrower's option) in gold. When the Bank guarantees a loan it is under obligation to see that the lender's charges are reasonable; and if a loan is not forthcoming at reasonable charges the Bank may lend directly.

In its early years the Bank's record has not been spectacularly successful. In the main this has been due, either directly or indirectly, to the narrow limits of its resources. Given the world scarcity of dollars and the fact that in the early post-war years the U.S.A. was the only really big source of goods for reconstruction and development, it was dollars that countries needed to borrow for both these purposes. The dollar resources of the Bank have been the resources that really mattered; and $700 millions was a miserably small sum in relation to Europe's reconstruction needs and the development needs of tropical Africa, India, China, or South America. The Bank has sought to extend these resources by exercising its power to borrow dollars against the guarantee of the uncalled capital. This has, without enlarging the Bank's resources so very greatly, had the result, in some ways unfortunate, of putting effective control of the Bank into the hands of conservative bankers from Wall Street. Only by pleasing Wall Street could the U.S.A. loan market be tapped, and even then American lenders kept a close eye on the American share (and not the total) of the guarantee capital. The upshot has been that the International Bank, instead of being in the hands (as Lord Keynes hoped) of

'a gang of adventurers' who would quickly help to get the world on its feet again, has been infused by an orthodox banking spirit—the spirit of men who lend out umbrellas only when the sky is blue and ask for them back as soon as the first storm spots fall.

For these reasons the Bank's operations have been small, they have been expensive to borrowers, and they have mostly been confined to particular projects. One of the first loans was to a French official corporation for general reconstruction purposes. Then there was a similar loan to the Netherlands. Subsequent loans have been more and more narrow in their purposes—a loan to Chile for a hydro-electric scheme, one to Dutch shipping companies for the purchase of ships, and so on. The general rule is now that the loans must be for specific purposes. The charges have been high: the basis has been $3\frac{1}{4}$ or $3\frac{1}{2}$ per cent. (the rate at which the Bank could borrow in Wall Street) *plus* a margin of 1 per cent. Rates charged on American loans to Europe in the nineteen-twenties were, of course, much higher than this, but they were for indiscriminate loans, whereas the International Bank lends only for very cautiously selected projects which the Bank itself will watch closely.[1]

So it is easy to label the loans of the Bank as mere chicken-feed and to say that it made no appreciable contribution to post-war reconstruction. On the other hand, it must be admitted that there is force in the Bank's argument that it is not in the business of making political loans or relief loans. The business of getting fruitful international investment going again is a very difficult one, and it may well be that the Bank's restriction of its loans to a few very carefully selected projects is in the long run the only effective way of blazing the trail for sound investments in far greater amounts by private capital.[2]

[1] The closeness with which the Bank expects to keep watch on the use of its loans limits its usefulness. For example, it is understood that the proposal for a series of loans for development in British colonies broke down because the British authorities could not tolerate as much interference in administration as the Bank's watchfulness would seem to involve.

[2] Since the above was written, further reports of the Bank's work have been more encouraging, and have made me feel that I have been a little ungenerous in my comments.

APPENDIX III

THE ALLEGED ABSORPTION OF MONEY BY THE STOCK MARKETS[1]

THE alleged absorption of money by the stock markets occurs because on a rapidly rising market it pays 'bulls' to borrow money for speculative purchases at very high rates of interest, the rapid capital appreciation being expected to cover the high cost of borrowing. The argument therefore depends at root upon the 'bulls' *needing to borrow*. Hence the far greater prominence of the problem in New York, where the settlements are daily, than in London where the speculative markets used in the inter-war period to have fortnightly settlements. Indeed, one cannot help thinking of this problem mainly in terms of the Wall Street experience of the late nineteen-twenties. There call and other short money rates rose to fantastic heights, with the result that it paid banks in the interior of the country, and indeed in the later stages banks in many other parts of the world, to lend money in the New York market rather than employ it at the more customary rates charged to borrowers nearer home. And this was the burden of the country's complaint—the farmer, the manufacturer, and the small trader felt that, to obtain loans which they could put to 'sound' use in the employment of factors of production to make useful things, they must bid highly enough to compete with the absurdly high rates of New York. The force of this public opinion was apparently sufficient to make the Federal Reserve authorities loath to damp the boom by forcing interest rates up as far as many experts thought desirable.

The existence of certain relatively 'depressed areas' in the United States throughout the period and the prevalence of this belief that the money flow was being dammed up in Wall Street tended to blind many people, both in the United States and else-

[1] When the first edition of this book was written, the Wall Street episode of the late nineteen-twenties was much nearer, and an entire chapter was devoted to *The Problem of Stock Market Control*. With the lapse of time many of the questions there discussed have lost interest, but the fallacy examined in this Appendix has still sufficient interest to justify reproduction here of a few paragraphs from the earlier editions.

where, to the fact that America was involved in a violently inflationary boom. Subsequent events have altered views, and it has become plain that the drain of funds into Wall Street did not involve the starvation of 'legitimate trade and industry'. On the contrary, there is every indication that 'legitimate trade and industry' found it too easy to obtain capital. How is it that the drain of funds to the financial centre does not imply inadequate funds for the more fundamental activities?

The answer is that whenever money is spent by a speculator in the purchase of a security someone else, selling the security, receives money. A purchase implies a sale. Money coming in through the hands of 'bulls' becomes money going out through the sellers of securities. That is not quite the whole truth. It may be argued that the greater volume of transactions in the stock market necessitates the holding of larger average balances, just as the enlargement of the national income in a period of expanding trade necessitates an expansion in the total of cash deposits and circulating cash. To some extent this is the case, for brokers and money-dealers in the call money market may want to hold rather higher average balances when the turnover becomes much bigger. Banks, where there are many of them, may think it necessary to hold rather larger cash reserves to meet adverse clearing-house balances. But experience shows that the financial institutions can, in fact, thanks to their geographical concentration and the highly developed clearing arrangements, cope with an enormously increased turnover with very little increase in balances. To the extent that they do need increased balances the money flowing to the financial centre does stay there; but the bulk of it is rapidly passed on by the dealers in the market to the sellers of securities. These securities are likely to be in the first place old securities. The sellers of them, if they distrust the boom development, might conceivably hold the proceeds as Savings Deposits, in which case there will have been some genuine tendency for money to be withdrawn, as the stock market speculation develops, from active use. But it is humanly certain that this will not be the end of the story for long: optimism is infectious and the bullishness is likely to become well-nigh universal.[1] In this event, old securities may

[1] Readers will notice that I am paying scant attention to Keynes's analysis of the Wall Street boom. I believe subsequent events to have cast serious doubts on the validity of his interpretation and, moreover,

change hands many times at rising prices, but most original holders of old securities will be induced to part with them, to the 'bulls' who are offering borrowed money, by the attractions of new securities coming into the market. In fact, new securities will be forthcoming in large amounts. For the rising prices of all securities make it easier for entrepreneurs to market new shares and stocks in order to finance their capital developments. Indeed, the issuing of new stocks and shares may well have become for the moment the easiest way of raising capital for any purpose. If bullishness is the prevailing sentiment the prices of old securities *must* rise high enough to attract into the market sufficient new securities to absorb the bulk of the borrowed money being poured into the market by the 'bulls'.[1] The attraction of these securities implies inducement to entrepreneurs to extend their capital developments (though to a very limited extent they may use the proceeds simply to pay off bank loans). The proceeds of the new issues therefore become Cash Deposits to be disposed by entrepreneurs on the purchase of raw materials, labour, &c., to be employed in capital construction. The money 'withdrawn' from use by industry and trade for stock market speculation is poured back by the stock market into the 'productive' channels. Except to the trifling extent that the financial markets do need larger balances to cope with their increased turnover, the absorption of money by the stock market is illusory.[2]

This conclusion is, of course, subject to the various conditions with which the preceding paragraphs are hedged about. But I believe that the reservations are no serious qualification to the conclusion when the situation under review is one of those extreme speculative booms which alone evoke serious protests that money is being drained from the channels of industry and trade.

I believe that the development of an extreme 'bull-bear' position is scarcely conceivable. But readers interested in this problem should pursue the subject in the *Treatise on Money* (esp. vol. i, pp. 248–57, and vol. ii, pp. 195–8). On the Wall Street boom see also Hawtrey, *Art of Central Banking*, chap. ii.

[1] I believe this statement to be of universal validity. It is so worded to avoid reference to the 'bull-bear' situation which Keynes envisaged and to which the statement could certainly not be applied.

[2] When speculation in securities is indulged in, even by those who deal mainly in cash, it is true that some part of the total supply of money must be wholly employed in these transactions. How much we do not know.

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